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ART. I.—Notice of an Inscription on a Slub discovered in February, 1838, by Capt. T. S. Burt, Bengal Engineers, in Bundelkhund, near Chhatarpur.—By the Editors.

Captain Burt will have imputed, to the right causes, (Mr. Prinser's illness, and absence) the delay, with which we notice the impression of the above inscription, so obligingly forwarded by him. This communication, has added to the obligations which antiquarian science owes to him. The legend of the inscription is now presented to our readers with a translation—a relevant extract from Captain Burt's Journal*—some explanatory notes,—and a prosodial key to the inscribed verses, or rather Poem. A facsimile of the inscription is not added, because the character resembles the specimen published in our number for April, 1837; and Captain Burt describes it as No. 3, Allahabad pillar.

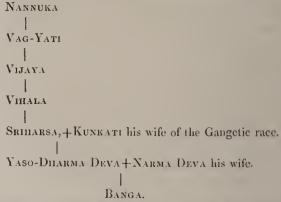
This slab, it will be seen, was found detached at one of several temples at Khajrao, nine coss from Chhatarpur, which is on the high road connecting Saugar and Hamirpur. Khajrao is described by Captain Burt as near Rajgarhy, which we assume to be the Rajgarh of the maps—a fortified town on the right bank of the Cane river S. E. from Chhatarpur. The place abounds with remains of temples, statuary, and monuments of ancient times. The slab was found in the temple dedicated to "Lalajee." This name, (unknown to the Sanscrit theogonies) is probably the appellation locally current of some divinity whose alias we cannot conjecture. It may however be assumed, that

^{*} Captain Burr's letter covering the inscription has been mislaid. We hope we have not taken a liberty in making an extract from a Journal of his Travels, in the hands of Thacker & Co., for the press.—Eds.

the slab does not belong to this edifice; and that that, celebrated in the polished verses now presented, has yielded to the mouldering hand of time. We may also assume, that its site, was the consecrated spot, described by Captain Burt, and that it gives us the genealogy of Rajas who formerly ruled in that part of the country.

We learn that Raja BANGA erected a lofty temple for the reception of an emerald emblem of Siva, and a stone image of the god. On the death of this Raja, seemingly by voluntary immersion in the confluence of the Yamuna and Ganga, his territory was administered by the pricst YASONHARA, -perhaps, during the minority of his heir JAYA VARMA DEVA. The original inscription, of sixty stanzas, was engraved and put up in 1019 Sambat, or 962 A. D.—that is about 877 years ago. From the two last, or supplementary, stanzas we learn, that it was engraved by order of Raja JAYA VARMA DEVA in "irrcgular" letters. He afterwards had it re-engraved in elear character: then because effaced, he again, at the distance of fifty-four years, had the poem reengraved in the Kakuda character on the slab, from which Captain Burt has taken a faithful impression. It bears the date Friday, Vaisakh 3d, Sudi Sambat 1173, A. D. 1016. The poet was Sri RAM, who has not failed to give his own genealogy, and the ealigraphist was "that GAUD'A' KAYASTHA."

The pious Banga appears to have been of the Lunar race. The pedigree given by the slab is this



Banga appears to have been succeeded by Jaya Varma Deva, who may have been his son.

In the 12th vol. of the Asiatic Researches there is copy of an imperfect inscription taken from a slab translated by Capt. Price, who found it near Mow, a town ten miles from Chhatarpur. A place of that

name, in a North Westerly direction, appears on the map near the left bank of the Dassaun river. The name of Java Varma Deva is in the royal genealogy recorded on this slab; of which the date is effaced. This genealogy has also its Vijava; but it cannot be identified with that of Banga. It appears however that when Ananta, the Brahmin minister of his father and grandfather, drowned himself in the Yamuna, some other (probably a Brahmin) was appointed to the administration by Java Varma,—because, as Capt. Price infers from words used in the inscription, he had abandoned worldly concerns.

In the Khajrao slab it is not stated that Jaya Varma Deva was the son of Banga, but we learn that the priest Yasondhara administered after the pious suicide of Banga.* These circumstances afford some grounds, though weak, to identity the Jaya Varma Deva of both slabs. In case of identity, we may suppose that the two genealogies exhibit distinct branches of one family, and that Jaya Varma Deva succeeded collaterally. No doubt local inquiry would fling light on the history of the Kings or Chieftains here recorded.

The poet elevates Banga into a great monarch and conqueror. Kings of Oude and even Ceylon attend to do him homage, and his captives are the wives of the kings of Andra, Radha, and Anga. All this of course is the exaggeration and fancy of the poet. But the 19th stanza seems however to indicate the actual conquest by Vijaya of southern territory.

Banga's piety was not limited to the erection of the shrine. He also built mansions for seven Brahmins who officiated at the temple, which he endowed with lands. "Two yavas at Sri Brahma kalpa; one in the vicinity. Kalpa gram, on the south of the snowy mountains, was another." This obscure sloka introduces a new land measure. The yava, or barley corn, is the lowest linear measure,—and suits, neither royal munificence, nor priestly expectation. We have Kalpi on the right bank of the Yamuna; but unless to fill up the verse it would hardly be described as south of the snowy mountains. Is any Sri Brahma kalpa known in the vicinity?

We should be much gratified if this, and other points connected with this inscription receive the attention of Captain Burt, or any other intelligent correspondent who may have the opportunity of local inquiry. We will not dismiss the temple, without noticing XIÇÇHA "the carpenter," the Christopher Wren who built the "cloud-capt" fabric. No Indian name approaching to this is now known. Was he foreigner?

^{*} In the 9th verse of the Mow slab the name of JAYA VARMA's father is incomplete. But BANGA would not suit the metre, and would make an incongruous compound.

Of the character of the Poem a few words remain to be said. It is eomposed in an ambitious style by an accomplished scholar. His verses are polished and elaborate; some however are obscure, and the quaint pedantry of Sanserit Poetry here abounds. But in spite of these defects, many of the verses may be justly commended as containing much of truly poetical imagery, conveyed in lofty and polished diction. But we must leave space for Captain Burt's narrative.

Extract from the Journal.

I reached Chatterpore at 9 o'clock at night, (which was an earlier hour than I had stipulated for by twelve or thirteen hours), but my reason for pushing on was in order to have time to pay a visit to Khajrao, a place situated about nine pukka (full) koss (eighteen English miles) from Chatterpore, to the right of my road, and lying not far from Rajpore, or Ragurhy, or I think it is more correctly call-The natives at a distance sometimes call Chatterpore ed Rajnuggur. Chatpore. It was whilst I was on my return trip from Eraw to Saugor that I heard, from a palky bearer, of the wonders of this place-Khajrao, near Chatpore, as he called it; and which he stated to be situated from Saugor seven munzils, or daily stages, for native pedestrians, which, at fifteen miles per day, is about the thing, Chatterpore being distant from Herrapore fifty miles, or one hundred from Saugor. I may as well now employ my twelve or thirteen hours spare time in taking a look at Khajrao along with the reader.

Immediately on my arrival at Chatterpore, at 9 o'clock at night, I told the dank moonshee, (baboo, or writer) to procure a double set of sixteen bearers, and two spare men for a bangie, containing my food and printing materials, to start as soon as possible for Khajrao. I wished to arrive there before sunrise in the morning, and it lay at a distance of eighteen or twenty miles thence by an indifferent road. I left a pair of trunks and a pair of patarahs (tin boxes) under the care of the baboo, as I should not require them until my return, and in about an hour started for Khajrao, viâ Rajnuggur, and reached the temples of the former at seven or eight o'clock in the morning. ruins which I went to see lie at some distance from the village, which lies beyond them, and this place I did not see, as a quantity of jungle intercepts the view of it. I was much delighted at the venerable, and picturesque appearance these several old temples presented, as I got within view of them. They reared their sun-burnt tops above the huge trees by which they are surrounded, with all the pride of superior height and age. But the chances are, the trees (or jungle rather) will eventually have the best of it. My first inquiry, after taking breakfast, was for ancient inscriptions, and a temple close by was immediately pointed out as the possessor of one. I went there, and sure enough there was an inscription in the No. 3 Sanscrit character of the Allahabad pillar, in the most perfect and beautiful state of preservation, engraved on a stone slab which measured about five feet by four, and was completely covered on the upper side with writing; the stone was laying at a slope against a step in the side wall of the temple. It was the largest, the finest, and the most legible inscription of any I had yet met with, and it was with absolute delight that I set to work to transfer its contents to paper. I took two copies, one on a plain white paper, without ink, by pressing it in a wet state with towels into the hollows formed by the letters, and another reversed with ink, which I spread upon the stone. The facsimile, or impression, obtained was the most beautiful specimen I have by me, and I regretted that the surface of the stone twenty square feet, was too large for me to spare time to make a duplicate with ink. The date of it is 1123,* Sunbat, or 771 years ago, as was distinctly pointed out in the lowermost line of the inscription; having done this I took a look around,-"Si monumentum quæris, circumspice,"-and could not help expressing a feeling of wonder at these splendid monuments of antiquity having been erected by a people who have continued to live in such a state of barbarous ignorance. It is a proof that some of these men must then have been of a more superior easte of human beings than the rest.

Khajrao is situated one koss distant from Rajnuggur, the Rajah of which sent to express a hope I would pay him a visit on my return: and as I was in his dominions, I thought it was as well to do so in the evening. I found in the ruins of Khajrao seven large Dinallas, or Hindoo temples, most beautifully and exquisitely carved as to workmanship, but the sculptor had at times allowed his subject to grow rather warmer than there was any absolute necessity for his doing; indeed, some of the sculptures here were extremely indecent and offensive; which I was at first much surprised to find in temples that are professed to be erected for good purposes, and on account of religion. But the religion of the ancient Hindoos could not have been very chaste if it induced people under the cloak of religion, to design the most disgraceful representations to desecrate their ecclesiastical erections. The palky bearers, however, appeared to take great delight at the sight of those to them very agreeable novelties, which they took good care to point out to all present. I was much struck with the beauty of the

^{*} The impression gives 1173 Sambat.

inner roofs of the temples, which were circular, and carved in a most claborate style.

I told one of the bearers to try and find out whether there were any passage or steps leading to the roof inside or outside the building: as if there were, I intended to pay a visit to it. After searching about for some time, he reported that there was a way; so I went to look at it, and found that the only means which presented itself of access to the upper story, existed on the inside, and from one of the side passages (dark as Ercbus), and that it was requisite to ascend by climbing up the sacred images.

From the side wall, which was perpendicular, I first sent up one of the bearers, and then by laying hold of the leg of one god, and the arm of another, the head of a third, and so on, I was luckily enabled, not however without inconvenience, to attain the top of the wall; where, on the roof, I found an aperture, just large enough for me to creep in at. On entering upon the roof, I found that my sole predecessors there for several years before had been evidently the bat and the monkey, and the place was not for that reason the most odoriferous of all places in the world. However, it was necessary that I should see and inspect the nature and formation of these upper stories. The circular roofs, before referred to, were formed by the overlapping of huge long blocks of stone, which stretched from the capital of one pillar to that of another, and upon both of which they are supported. The others are placed so as to fill up the corners of the square (or other angnlar figure of which the plan of the roof was formed) by other huge long blocks laid across these interstices diagonally, from the centre of one face to centre of another. The same occurred above them, smaller blocks being used as the circle contracted, and as the roof tended towards a point. Here a square stone was laid on, resting upon the superincumbent ones. There was no masonry, I mean no plaster of any kind, used for the purpose of cementing these slabs to one another, their own weight and position alone being sufficient to give them permanence-a permanenee which has lasted for ages, and which would, unless disturbed by the growing of trees or other disturbing cause, sempiternally exist. I saw nothing else worthy of notice, only here and there, immense parallelopipedons of stone, in some of which, the presence of holes apparently drilled for the intrusion of the lever for raising them was indicated. There appeared to be no way of returning excepting that by which I had effected my ascent, so I set about my descent as well as I could, for this was more difficult than the ascent; but after resting first one foot, then another, upon any projection I could meet with, I managed to effect, without loss of limb my perilous descent. I

noticed a vast quantity of beautiful seulptures of all kinds, to attempt to describe which would exceed the limits of this work, even if I possessed the means of doing so; but as I do not, and have made no sketches there, I must per force be excused from inserting any. Having visited several temples, in all seven, of which the names are as follow, I went to take a look at the rest of the wonders of the place. One temple was dedicated to Mahadeo; a second to Parnatti; a third to Kundari; a fourth to Lalaji; (1) in which I found the large inscription; a fifth to Nandeo, or the Mahadeo bullock god; opposite to which and facing it, in an outer building, contemporaneously erected, is a splendid figure of the largest bail, (or ox) I have ever seen; the animal was sitting upright upon the ground, and in this state measures seven feet long, five feet high, and three and quarter feet broad, and weighs by my old way of calculating 681 tons, or 18721 maunds. I had not sufficient time to make a drawing of him, being obliged to notice more interesting matters. The sixth temple is eonseerated (may I use this term?) to Chatterbhoj; and the seventh (what think ye of that reader) to our fourth friend of the Hog species-to Barao, (2) and in which there is, without exception, the finest, (and last) but not largest, specimen of this animal I have as yet seen; and I don't think there are many others in India, excepting one of which I know the locality, but have not visited it. The dimensions of this interesting object are as follow-His height is five and three quarter feet, his length eight feet, breadth three and quarter feet; all these dimensions are approximations, made by means of my walking stick, which measures rather more than a yard in length: so that each of them may be perhaps increased by about one inch; his weight will be, according to our method, ninety tons, or about 2461 mainds. This is pretty well for the weight of the gentleman just after breakfast. What the dcuee would it be after luneheon? I am happy to say we have in this specimen unequivocal proof of the presence of a complete and well formed snake which is lying under him, (3) partly in an incurvated position, but evidently subdued; the female figure, that should be here has been taken away (confound the raseally despoilers), and nothing remaining of her beautiful form (for I am sure it must have been beautiful, judging from the rest) but two feet, and her hand, which is posited upon the left throat or neek of the

^{1.} Divinities by the name of Kundari and Lalaji are not found in the Sanscrit theogenies, they may be familiar designations locally current.

^{2.} The Varáha Avatár of VISHNU is well known.

^{3.} The snake Ananta or Sesha, which upholds the earth. The child is the infant Hari described as reposing on this snake.

animal. One additional circumstance occurs too in this specimen which is the remains of a child resting upon the snake's neck. I should conceive that this figure of a child is meant to represent the child of Prithei, viz. mankind, born of earth (or Prithec), and of whom the fable represents Hiran, the snake, to have been the enemy or destroyer, but who has here triumphed, and is resting upon the serpent's neck-"Thou shalt bruise his head, and he shall bruise thy heel." Another very extraordinary fact is, that the tail of the Barao, though broken off, (as indeed is that of each of the other specimens) must evidently have joined on to the tail of the reptile; this would seem to convey the idea that the tail was either part of the enemy, or the enemy itself; but this discussion I must leave to the learned, being unable to grapple with it myself. The tusks of the Hog are curved in the finest and most determined manner. I do not recollect in what direction the woman's feet are turned in this specimen, whether towards the animal, or sideways from him. I would willingly have given a hundred rupees (10%) to have had a good sight of the "Prithee" creature, (who has been taken away,) and that in a mutilated state too, as they have left her feet and one arm. The Barao stands on a fine thick slab raised on a high chabutra, which is accessible by steps formed of red granite, (mind that). The roof is well formed, strong, and likely to last for ages; as is also the Hog. I think he was covered with parallel rows of human figures, like unto the others, but upon this fact I beg to say I do not feel justified in speaking decidedly.

Let us now look in at the little Mahadeo, or lingam, which is to be seen in another temple, situated not far from this one. In order to arrive at it, it is necessary to ascend a considerable number of steps, at the top of which is situated the representation of the vital principle. Let us now measure the height of the gentleman. The natives objected to my going inside, without taking off my boots, which would have been inconvenient; so standing at the door way, I saw a bearer measure the height with my walking stick, it amounted to 23 of its height, or eight feet, and its diameter about 11, or four feet. Its weight will be about 71 tons, or 207 maunds. It was erected in a receptacle, which was raised from the ground about four feet, and twenty-five feet in diameter. That of the room exceeded it by perhaps three or four feet on each side,-there being a passage all round it. I understand a light is regularly kept burning there during the night time, and it was considered by far the largest lingam in India, and is consequently much venerated. The dimensions of the stone slab from which I copied the inscriptions in the other temple, were 51 feet length, 3 feet breadth, and 1 foot thickness-its weight is therefore about

123 hundred weight, or 17 maunds. This stone lies detached from some part of the building (from whence I cannot say) and rests inside one of the temples before mentioned. I must return to state a peculiarity I met with in this Barao. His two left legs were both placed foremost; perhaps this was intended to add to his strength or durability, by giving him what they might have considered greater base; but I should doubt whether the base would not have diminished instead of increased by this arrangement. In the other specimens, I think the legs of none were advanced, but as if the animal were standing still. A large tank exists within fifty yards of this Hog, but there was not much water in it at the time I was there. A great deal of jungle surrounds these ruins. Near the water entrance to one temple I found a lion or two (stone ones, not living animals); one of whom seemed to be seizing a wrestler by the left arm, with one paw up and mouth open ready to destroy him. Was this Narsing, again, and Heran kussup?(4) I had a desperate hunt here (not after a hare) but after my pencil, with which I intended to have "knocked off" the last named figure, but I was obliged to "knock of," altogether (as the sailors say) or leave work, because I could not find it. After sending two or three men to two or three places to hunt for it, I was obliged to depart without making the intended drawing, and after I had progressed about a mile from the place, when it was too late to return, lo, and behold, I found the pencil upon my palanquin drawer. I soon after got to Rajnuggur, but before finally taking leave of the seven temples, I shall state my opinion, that they are most probably the finest aggregate number of temples congregated in one place to be met with in all India, and all are within a stone's throw of one another.

श्रोनमः शिवाय ॥

विधुप विकट वटानामजायमानाय वीजमूताय । मुदान्तर्नमः पालनविलयक्तते निष्क्रियायापि ॥१॥

तूर्णं घूर्णति यच गोचिश्विरिश्रटङ्गः समूहस्त्रसन्
पाच्यौषीच्नतमूर्त्तिरार्त्तविरुतं कुर्बन् कुकुङ्ग्मिना ।
सप्तांभोध्यविध प्रधूतवसुधावन्धःकवन्धीकृतः
स्ताम्भाद्रिः चयकाण्डताण्डविधिः श्रेवः श्रिवायास्तुवः ॥२॥

^{1.} HIRANYA KASIPU, Gold-clad, or Daitya or Titan; for whose destruction VISHNU took the form of the man-lion.

कस्त्वं द्वारि दिगम्वरः क्वपणकः कस्मादकस्मादहो वामे श्रूलंधरो धिगायुधिवधिं वहीस्त्वदर्द्धाननु । मां जानीह्वि महेश्वरं स्फुटमिदं वह्येप्यभावे स्थितिः प्रेयस्याः परिहासतो विहसितः श्रम्भुः श्रिवायास्तुवः ॥३॥

पशुपतिवदनक्षद्मिन क्रतवसितः पद्मसद्मिन सदा या । जयित विसत्त्वणरूपा मुक्ताभा भारती चेयं ॥४॥

गिरिप्रशिरिस यक्कन् हस्तिमन्दोः कलायां
मृदुकमलमृणालायांश्रगृष्ठः शिश्रुत्वे ।
जयतिविधृतमूर्द्धीचाल नीलाम्बुजेन
स्मितकुपितमृडानीतांडितो नागवत्सः ॥५॥

कल्पादी किल केवलं खमखिलं ध्वान्तावनद्वं धुवं भून्यं वीच्य सिसृच्ततो जगदभूदद्वादमुद्रोनिलः। तचाभूदनलोनलाज्जलमभूदीजादमोघाज्जला जज्वालामालि च्चिरणमयं मद्यदभूदण्डं विभीर्श्रेच्चणः ॥६॥

तदण्डभाण्डखण्डाभ्यां सप्तेवं विद्धे धिया । ब्रह्मा ब्रह्मनिधीन् पुचान् मरीचित्रमुखान् मुनोन् ॥०॥

मध्ये तेषां प्रह्ततमसां मानसानां मुनीनां श्रीमानिः प्रधितमहिमा नेचपाचैः प्रसूतं ॥ यस्य ज्योतिःपरजजरिनं मण्डनं वड्डमिन्हो श्रान्द्राचेयः समजनि मुनिस्तस्य पुचः पविचः ॥ । । । ।

द्वरापास्तसमस्तसंश्यविषय्यासप्रकामोज्ज्वल क्रान्तालोकविलोकिताखिलजगत् स्वर्गापवर्गस्थितेः। सर्वज्ञप्रतिमस्य तस्य क्रातिनः कान्तस्य पुष्यात्मनः पारंगनुमतस्तदीयमहसः कोवा महिम्नां चमः॥८॥ नीरन्ध्रो नितरां निसर्गसरतः सारोत्तमोभ्युत्रतो निर्यन्थिः प्रधुतायभागग्रुभगः पर्वस्वखर्वस्थितः । आमूलं फलितोथ सेवितविपत्कूरारिदावाग्निना न स्वानिं गमितस्ततः समभवदाय्वर्यमात्यद्भतः ॥१०॥

त्राचन्द्रं चन्द्राचेयवंश्वजाः चितिभुजः चितिमाद्योतंते ॥१९॥

ये पूर्वे नृपविष्ठितचितितलाः संक्रान्तधर्मिप्रयाः प्राणप्रार्थनयाष्यखिन्नमनसः पर्थ्याप्तसत्यव्रताः। निःसिन्दूरितदुर्विनोत वलवत् सामन्तसीमन्तिनी सीमन्ताः पृथिवीभुजो विजयिनस्तेस्योखिलेस्यो नमः ॥१२॥

कालेने इ महावंशे प्रश्नंसापांशुरंशुमान् । मुक्तामणिरिव श्रीमान्ननुकोभून्महीपतिः ॥९३॥

तेन विक्रमवलेन धन्विना क्रामता युधिवधाय विदिषाम् । धुन्वता धनुरिधज्यमर्जुनं स्मारितादिवि विमानगामिनः ॥९४॥

तस्मादुदारकीर्त्तरजनि जनानन्दसुन्दरः श्रीमान् । तनयो विनयविधाने वाक्पतिरिव वाग्यतिच्चितिपः ॥९५॥

विद्यावदातसदयेन कविष्रजानामातङ्क ग्रङ्क्षमकल ङ्कितविक्रमेण । तेनापनीय ग्रयनिर्मललोचनेन सङ्कोचिताः पृथुककुन्दुकथार्थ कन्धाः ॥९६॥

तस्य चमातिलकस्य लोकतिलकः पृष्टिवीपतेर्भूपतिः
स श्रीमान् विजयो जयाय कुश्चली जन्ने कृतन्तः सुतः।
यस्योदात्तमतेः प्रसूतिसमये धम्मर्था महिम्नां निधेः
सानन्दं सुरसुन्दरीभिरवनौ चिप्ताः सलाजाः सजः॥१०॥

किन्नरीभिरिधकं धरासखीराकलय्य विजयस्य भूभुजः । काकलीकलमगीयत स्पुरत् प्रोचमुल्लुलकमुज्ज्वलं यशः ॥९ ८॥

विनयनतसुमिचापत्यसम्वान्तितान्तिः
पवरहरितभूमिः क्रान्तपर्व्यन्तभूमिः ।
सुद्वृदुपञ्चतिद्चो दिच्चणा्णां जिगीषुः
पुनरवित्वयोधे धन्वते (5) तूर्व्यमर्थः ॥९९॥

तस्मान्नृपतिसमुद्रादुदपादि नरेन्द्रचन्द्रमाः।
स्पृच्चणीयः श्रीवाच्चिनामा विच्चततमा वन्दिवाग्ध्युदयः॥२०॥

प्रसन्ने तच भूषाले प्रसरचिचभानवः। प्राभवन्नमितावासाः सरोषे दिषदालयाः ॥२९॥

कोश्रपानमसिधारयोषितं प्रान्वभूत्र जनरत्नसम्पदां । पच्चपातमिषुषु स्वभूपुरे प्रापुरस्य न सुचृत् सभासदः ॥२२॥

तस्मात्तीव्रप्रतापोज्ज्वलनकवित्तोत्तानभूपालतूलात् संपञ्छीतद्रुमाणामनणुगुणगणालङ्क्षतेः कीर्त्तिचर्तुः । सञ्जीचर्षारिचर्षज्वरचरणमणिः चीणिनःशेषदोषः सन्तोषाय प्रजानामजनि निजभुजाक्रान्तविश्वान्तकीर्त्तिः ॥२३॥

यं ट्रुघ्देव द्वापाणपाणिमक्ततन्यापातभावं युधे क्रोधाक्रान्तविलोचनोत्पलदलम्बूभङ्गसीमाननं । उत्साहोह्रदयार्दतः (6) करतलाद्वाधोमुखाः कीर्त्तयो दिग्भ्यः साध्वसवेपमानवपुषस्तस्युः परेषां क्रमात् ॥२४॥

तेनाच्युतेन भीमेन वाणेन क्वतवर्मणा। समुद्रपरिखा पृथ्वी पुरी भूरेण रिच्चता ॥२५॥

^{5.} Sic in Orig.: but it seems an error of the engraver.

^{6.} Sic in Orig. There appears an error of the engraver, the words ntsahohadayardratah give no intelligible sense, and are omitted in the translation.

त्रपच्चधर्मारिविचचणक्रमः सदैव दोषाकरसङ्गभद्गुरः । विनिष्कतकूरभुजङ्गभङ्गुरस्तिरस्तरोति स्स सतूर्णमर्णवं ॥२६॥

हस्तापास्तप्रवरतुरगैर्द्ररमुक्तासपत्ने र्द्ररारातेः सपदि श्रिरसा शासनं धारयद्भिः। तस्य द्वारि दिरदमदिनःस्यन्दपङ्काङ्कितायां सेवाहेतोः प्रणतिपरमैराशितं भूमिपालेः॥२०॥

चन्ट्रोज्ज्वलगुणा वर्चीमहाघी हृदयङ्गमा । हारावलीव तस्थासीत् कंकुतेति प्रियोत्तरा ॥२८॥

वर्णः स्वर्णक्चिर्विचोचनयुगं, नीलं सचन्द्रोत्पलं पाणिः श्रोणमणिर्द्युतिः सचरणा दन्तच्छद्गेविद्रुमः । सद्यःश्रुत्तिविमुक्तमौक्तिकतलस्वच्छन्तु चेतोयतः स्वीरतं भुवनेकभूषणमभूत् तत्सङ्गमे कामिनी ॥२८॥

तस्यास्तस्य स्मरणविह्निताघौघविध्वंसनायाः
सत्तीर्धायास्विद्यस्परितः सन्ततेः पुण्यकीर्तः ।
धर्म्भाधारः पितरि सुतरां साधुरिद्वप्रभावो
भीष्मोपेन्द्रभ्नमञ्जतिस्तः श्रीयशोधर्म्भदवः ॥३०॥

तस्य विषयरणप्रणामजं रिञ्जतं शिरिस सुश्वितं रजः।
त्राप्यकालपिलताञ्चतिं द्धत् सन्द्धाविधककामनीयकं ॥३९॥

एकस्मै याचमानाय दिजाय पलदः ग्रिविः । यावदर्धिजनं प्रादात् कोटिकोटिमसे।नृपः ॥३२॥

रतं भूमिलितालिकेन सदसि न्यस्तं सचेतायितं गन्तुं पत्रपुरःसरेण चरणैः स्थानं प्रभाविस्मितं । वक्तुं जीवजयादिशो नितचयं कर्त्तुं विनीताकृति स्तस्मिन्नाजिन राजकेन जयिनि त्रासादिदं लिच्चतं ॥३३॥ नित्योदितेन्दुभुजगाधिपधाम नित्य मानन्दिकुन्दकुसमं गगनाङ्गणं वा । तेनाद्य तद्दयमिदं यश्रसाभ्यधायि संशापितं सितसुधाधवलं चरित्रं ॥३४॥

सप्तसिमह्निमतुष्यः सप्ताक्रूपारपारदृश्वापि । न पुनरिह्नतस्य नृपतेर्गुणसागरपारगः कञ्चित् ॥३५॥˚

गांधारीं भजता प्रहृष्टशकुनिस्वानप्रियां प्रेयसीं भीष्मद्रोणनरास्यकर्णमुखदेग्य्याकर्ण्य संमूर्कता । तद्वम्भप्रभवावबोधितवता प्राप्यापि वंशच्ययं नप्राप्ता धृतराष्ट्रता समुद्योविदेविणेत्यद्भृतं ॥३६॥

कस्सात् षष्टिसहस्रह्मस्रिं भिरस्नन् युत्सृज्य खातः ज्ञत स्तत्पीत्रममुखेः पुनिक्तिभरासवभ्भोभिरापूरितः । वृत्तान्तं सगरस्य सागरविधावाकर्ण्यतूर्णं मुधा स्पर्धावानिधकं यथत्त जल्धेर्वेद्वत्तलागार्णवं ॥३०॥

विश्मेदं शार्देन्दु द्यंतिसुरिभखुरचुण्णभग्नाचपादं
पृक्षंचचुष्यंमुष्मादपथयति रथं सारिधः सप्तसप्तेः ।
यत्कुम्भः शातकुम्भस्तुचिनगिरिशिर्ञ्चंविविग्वार्कतर्कं
कुर्वन्नास्ते समग्तां मुद्रमसुरिरोपेवेश्मवैकुण्ठमूर्तेः ॥३८॥

भद्दावंश्रसमुत्पन्ना प्रसन्नावनितावनी । नम्भदेवाभवद्देवी पुण्या तस्य महीपतेः ॥३८॥

सदानसूया विह्नितागसेण्यसावरून्धती जीवितमण्युपासिता । वभी मदान्धं चमयन्त्यनिन्दिता मदालसाभून्नपुनः कथंचन ॥४०॥ सा देवी नरदेवाहेवाधिपतेः सचीव सचरित्रं। तस्मादसूत पूतं जयंतमिव वङ्गमङ्गभुवं॥४९॥

यशोदानन्दतां चक्रे पुतनामारणिकयां। जातो वृष्णिकुले कंसरिपोश्केत्ता नरोत्तमः ॥४२॥

तस्मादवाधितकोधात्रृसिंहात्रखलाविनः । हिरण्यकाण्युप्राणचाणं चके न केनचित् ॥४३॥

देवाकर्णय को श्रेलेश्वरिमतस्तूर्णं समाकर्ण्यता मादेशः ऋघनाध सिंचलपते नत्वा विद्यः स्थीयतां । त्वं विज्ञापय कुल्तेलेन्द्रवदेने दत्त्वोत्तरीयाञ्चलं नर्मस्थानगतस्य विचिभिरिति त्यतुं समुक्तं वचः ॥४४॥

का त्वं काश्रीनृपतिवनिता कात्वमन्ध्राद्रिपत्नी कात्वं राढापरिवृद्धवधूः का त्वमङ्गेन्द्रपत्नी। इत्यालापाः समरजयिनो यस्य वैरिप्रियाणां कारागारे सजलनयनेन्द्रीवराणां बभूवः ॥४५॥

का त्वं कस्य किमर्धमचभवती प्राप्ता श्रशाङ्कीज्ज्वलां स्पूर्जत् कीर्तिरहं बुधेकस्रहृदः श्रीवङ्गपृथवीपतेः । स्वान्ता विश्वमश्रेषमागतवती स्पारीभवत् कौतुका लोकालोकमहामहीध्रश्रिखरस्थायिश्रियं वीचित्ं ॥४६॥

मरकतमयं स्वज्ञं लिङ्गं यदर्चितमैश्वरं चिद्रशपतिना तस्माझन्धं प्रसाध्य किरीटिना। तद्वनितलं तेनानीतं युधिष्ठरपूजितं जयति जगति श्रीवङ्गेन प्रणम्य निवेशितं ॥४०॥ विश्मन्यश्ममयस्तेन भूपालेन प्रतिष्ठितः। दितीयो द्योतते देवः क्षेश्रपाश्चरो हरः ॥४८॥

तेनायं ग्रर्व्स्यभुव्याखरः श्रीवङ्गपृथ्वीभुजा प्रासाद खिदग्रप्रभोर्भगवतः ग्रम्भोः समुत्तम्भितः। यस्याश्वंतषकालधौतकलस्प्रान्तस्खलत्स्पन्दतो मेरोः गृङ्गमतुङ्गमेव तनुते चिचायमाणोक्णः ॥४८॥

तस्याभ्वंकषप्रङ्गिशिलेषे श्ररीरिषु कुतः ससविशः । खयमेव विश्वकम्मा तोरणरचनामिमां चक्रे ॥५०॥ जयित विकटवटीयं हाटककोटीरनेन तुलयित्वा । स्वतुलित तुलापुरुषाः श्रतशोविश्वाणितास्तेन ॥५९॥

सङ्घर्मातिरतारताः षरिहते संग्रुङ्घवंश्रोङ्गवाः प्रारव्धाध्वरधूम धूम्बयपुषोण्येकान्ततोनिर्मेलाः । सप्तेतेधनधान्य वित्तवसुधादानेन संमानिताः सौधेषु स्फटिकाद्रिकूटनिकटे प्रारोपिता ब्राह्मणाः ॥५२॥

दयंसुब्रज्ञाकरपेषु यवैकं प्रतिवासिषु । दक्तिणेन तुषाराद्रिं करुपयामी परोभवत् ॥५३॥

रिच्चत्वा चितिमम्बुराशिरसना मेतामनन्यायतिं जीवित्वा शरदां शतं सनवकं श्रीवङ्गपृथ्वीपतिः । सद्दं मुद्रितचोचनः स्वचृद्ये न्यायाज्जपन् जान्हवी कालिन्छोः सलिले कलेवरपरित्यागादगान्निर्वृतिं ॥५४॥

धर्माधिकारमनुशासित शास्तोत्र मित्रे सतां स्फुरितधामिन धर्मबुद्धौ । धीमदाशोन्धरपुरोधिस वेदगीते सिद्धिं जगाम जगतीपतिकीर्त्तारेषा ॥५५॥ त्वाचारिकपवरसावरवंश्रजन्मा

श्रीनन्दनः कविरभूत् कविचक्रवर्ताः ।

तस्यात्मजः समजनि श्रुतपारदृश्वा

श्रीमांस्तपोधिकवलो वलभद्रनामा ॥५६॥

स्नुः स्नृतगीर्गिरीन्द्रगरिमा भद्रस्य तस्याभवत् भूपानेर्भु विवन्दिताङ्किरनघः साहित्यरत्नाकरः । श्रीरामो रमणीयस्रक्तिरचनाचातुर्थ्यधुर्यः क्वती तेनेयं विह्निता प्रशस्तिरतुना तचान्ये स्वचिता ॥५०॥

न संकीर्णावर्णाः कचिदित्त न सापत्न्यकलुषाः स्थिताः कायस्थेन प्रधितकुलश्चीलोज्ज्वलिधया । पश्चपालेनायं विज्ञितपद्विद्येन लिखितः प्रश्चस्तिर्विन्यासः क्षतयुगसमाचारसदृशः ॥५८॥

विज्ञानविश्वकर्का धर्माचारेण स्वधारेण। चिच्छाभिधेन विद्धे प्रासादः प्रमथनाथस्य ॥५८॥

यावत् पृथ्वी सपृथ्वीधरनगरवनोदन्तमुद्रासमुद्रे यावङ्गाजिष्णुरूथणद्युतिरयममृतस्यन्दनः श्रीतरिक्षमः । यावद्वस्याण्डभाण्डस्थितिरियमथवा खाप्तता स्थाणवीयः प्रासादस्तावदेष ब्रजतु नरपतेर्दत्तकेलासन्हासः ॥६०॥

लिपिज्ञानिविधिज्ञेन प्राज्ञेन गुणश्रालिना। सिंहेनेयं समुत्कीणां सद्दर्णारूपश्रालिनी ॥६९॥ संवत् ९०९८॥

श्रीपृथ्वीपतिराजश्रीवङ्गदेवराज्ये श्रीमरकते स्वरस्य प्रश्नास्तः सिङ्घा

उद्यतोचमचोभृतोममृणिता मत्ति पतापदेर्चीताः। सङ्गरसङ्गभङ्गुररिपुपुचिपयाश्रृत्करैः ॥६२॥

दिग्दन्ती जयवर्म्मदेवनृपितः कीर्णाचरैर्यीचिख त्तेनालेखि पुनःप्रशस्तिरमलैरेषाचरैः चमाभुजा । विद्वद्भिर्जयपालचस्तकरणोय्मून्यादराद्दितो गौडः सोलिखदचराणि ककुदाकाराणि वंशाङ्कुरः ॥६३॥

कायस्थो जयवम्मेदेवनृपतेर्वं शस्य दीप्यत्कला साह्यत्यांवृधितः समुद्गततमो रून्धन्ननिन्द्यद्युतिः । संवत् ९९०३ वैशाख सुदी ३ शुक्रे

Translated by J. C. C. Sutherland.

SALUTATION TO SIVA.

1. With internal joy be there reverence, to the unborn God, the cause of those vast holy fig trees, which approach the moon: who himself devoid of action, is the preserver and destroyer.

2. For your welfare (saiva) be the mystic dance of the god, which occurs at periods of annihilation; in which rapidly whirl the summits of all the crested mountains, and in which, that mount (affixing as it were the earth shaken to the seventh sea), becoming like a headless but yet panting corse, falls a prostrate image,—trembling and whining by the voices of its elephants.

3. "Who art thou on the threshold, naked and abject? How "increasonably dost thou bear a trident in thy left hand. Fie on this "warlike shew. Truly those peacock's feathers become thee!" Thus gibed by his beloved, the god with a smile replies, "Know me to be Manesvara." "It is clear indeed, (she adds) and the confirmation is in your want of clothes." May that god Sambhu be for your welfare.

4. This beautiful Bua'rati(7) too excels, resplendent as pearl; she who ever dwells in her lotus abode on the face of Pasu-pati.(8)

^{7.} Sarasvati-eloquence personified.

^{8.} Name of Siva as lord of the animate world.

- 5. Excellent is that young elephant, who in his immature age, eager to snatch the tender filaments of the lotus, thrusts his probose is on the section of the moon, fixed on the brow of Siva, and who is struck by Mrid'a'ni' (smiling in her anger) with the agitated lotus sprout on her head (9)
- 6. Truly, in the beginning of the kalpa, the universe proceeded from Brahma wishing to create, when he had perceived the eternal void, enveloped in darkness and merely atmosphere. From him, when he had finished, proceeded the air. In that was produced fire; from fire proceeded water; from that prolific cause proceeded Brahma's vast golden egg, streaked with rays of light.
- 7. By his wisdom, from the two segments of that egg Branma-created his sons, the seven *Munis* (Marichi and the rest) the abode of holiness.
- 8. Amongst these dark-dispelling, intelligent Munis, was the illustrious Atri of celebrated greatness; in the cavity of whose eye, was produced the orb of the moon, whose abundant light radiates like luxuriant hair. From him was born his pure son Chandratreya.
- 9. Who can measure the glory and greatness of that holy man, the beloved image of the Omniscient, pure in soul; of him, who hath assured heaven and beatitude to the whole world, illumined with light, surpassed by his excessive splendor, dispelling all doubt and illusion?
- 10. From him sprung the wonderful VAYVARYAMA—faultless—naturally upright—of excellent disposition—eminent—unprejudiced—symmetrical from his large upper extremities—not slightly observant of fasts—fruitful to the root,—and never wasted by the spontaneous fire of eruel foes, the votaries of misfortune. (10)
- 11 As long as the moon (endures) the sovereigns of the race of Chandratreya illuminate the earth. [The rest of this sloka is wanting.]
- 12. Reverence to those ancient monarchs through whom the surface of the earth was encompassed by kings, who were friendly to the faith which has descended down—unvexed even when their lives were begged—strictly adhering to truth—who robbed of vermilion tint, the coronal streaks⁽¹¹⁾ of the wives of the powerful but rebellious chieftains.
- 9. Derga' is described as fondling a young Elephant. One of Siva's names is Mrida', or delighted; whence his consort is called Mrid'a'ni.
- 10. A double meaning pervades this verse; the epithets have a twofold sense, one applicable to the saint, and one to a tree. It would be impossible to preserve the double entendre in the translation.
- 11. The *Hindu* wife stains the line on the head made by the partition of the hair with red lead. The widow abstains from this and other ornaments.

- 13. In process of time in this great race the illustrious Nannuka became sovereign; exalted in panegerie, and radiant with splendor,—like a gem amongst pearls.
- 14. The chariot-borne denizens of the sky were reminded of Arjuna, by that stalwart bowman, rushing on to destroy his foes and brandishing his strung bow.
- 15. From him sprang an illustrious son, the sovereign Vag-yati, of excellent fame—celebrated by the happiness of mankind, and like Vakpati(12) in the observance of courtesy.
- 16. By that matchless warrior—whose eye was bright like the snake's—and who was kind to those eminent for learning—the shreds of anecdotes of Prithuka and Kunda were put to shame, when he had dispelled the keen fear of his poet subjects. (13)
- 17. Of him, (the ornament of the earth) was born a grateful son the illustrious Vijaya, renowned for vietory; on the birth of which magnanimous treasure of greatness, holy garlands with parched corn, (laja) (14) were scattered down by the delighted wives of the immortals.
- 18. By divine choristers, joined by their earthly companions, was melodiously warbled the bright and exalted glory of the sovereign Vijaya.
- 19. Like that snake, who is bent in humility, when made to uphold [the earth] by the son of Sumitra' (15)—rich in his extended verdant plains—conqueror throughout the world—that lord (skilled to reward his friends) about to subdue the southern quarters, once again in no mimic war, sounds his martial musick.
- 20. From that monarch, resembling as it were the ocean, was born the amiable king Vanila, the moon of men; by whom, darkness was dispelled, and who bade pour forth the stream of poet's praise.
- 21. Innumerable houses became pervaded by brilliant light when the king was pleased; so also the mansions of his enemies, when he was angered. (16)
- 22. In regard to gems and the wealth of the people Kosa pána in its sense of ordeal, was not known; but in its sense of adhering to the scabbard, was familiar to their swords. Paxapáta, in the sense of

^{12.} A name of VACHASPATI the Guru of the Gods.

^{13.} These are Pauranik Heroes, to whom various feats of valor and generosity are attributed.

^{14.} Laja, vulgarly called Khoi.

^{15.} LAXMANA.

^{16.} A double entendre or pun (the rhetorical figure slesh) pervades this Sloka. Indeed an epithet is construed with each of the antithetic members. It is said to be a stalk with two flowers.

loss of plumage, did exist in his capital in respect to arrows; but in the sense of partiality was not obtained by his friendly courtiers.(17)

23. From him, by the blaze of whose intense glory, great kings were consumed like cotton—from him, graced with every eminent virtue, who robbed of their renown wide spreading trees—was born, for the delight of mankind, that Sri Harsha,—a gem dispelling (as it were a fever) (18) the joy of his enemies, who (exempt from every sin) by his own right arm, subdued capricious glory.

24. Unconquered in war—armed with a sword—with his face dilated by the frown above the petals of his lotus-like eyes inflamed with anger—whom, having seen, the glories of his enemies gradually receded from all quarters, with faces quailing as if under the palm of his hand,

and with bodies now trembling with fear.

25. The sea-girt world like a citadel was preserved by that mailed hero, by means of his unerring and terrific arm.

26. Skilled to counteract his enemies, he soon reproached the sea; for he was unaddicted to partiality (apaxa dharma), and was averse to association with the evil minded (doshá kara), and inimical to vile and cruel detractors (bhujanga). (19)

27. Kings (who by their hands were able to push aside strong horses) cheerfully submitting to his dominion, would eat at the threshold of that hero—stained as it was by the mud caused by the exudations from the heads of elephants.

28. His most beloved wife was Kankuta, like a necklace, being bright as the lustre of the moon; inestimable, and heart penetrating.

29. She, who longed for his society, was the ornament of women—the sole grace of the world. For her colour shone like gold--her eyes were like the dark lotus, which expands before the moon—her hand was ruby-red—grace was in her steps--her lips were of coral--and her mind was pure like the pearl itself, just emancipated from its parent shell.

30. Of him and her (the offspring of the celestial Ganga(20) of pure renown, the remembrance of whom destroys a multitude of sins

^{17.} This verse is in the true vein of Sanscrit pedantry. The words explanatory of the double sense of the words (on which the poet puns) are of course wanting in the original.

^{18.} There is a fabulous gem by contact with which fire loses its combustive virtue. It is here alluded to.

^{19.} The influence of the moon on the tides has been long known to the Indians, and is often alluded to in Sanscrit poetry. According to the paxa, or semi-lunation, the tides increase or decrease; the sea is thus said to be affected by the paxa. It is likewise not indifferent to the Doshákara, the moon, or night-maker. It abounds also with Bhujunga, serpents. It is probable that the pedantic author of these verses, some of which are in the true poetic vein, considered the puns of this stanza as his chef d'œuvre.

^{20.} It is indicated that KANKUTA was of the Gangetic race.

and abounds in holy shrines) the son was Yaso-Dharma Deva, the abode of virtue, naturally obedient to his father, of great prowess, and creating a doubt whether he was Bhishma or Upendra. (21)

- 31. Though shewing like premature grey hairs, still the brilliantly white dust on his head (received in prostration to the feet of Brahmins) obtained increased beauty.
- 32. Sivi only gave a piece of his flesh (pal) to a single bird (dvija) (22) who begged it; but that king bestowed millions on all who asked.
- 33. Through awe of that victorious monarch, kings conceived these notions;—when prostrating their foreheads on the ground, that he was an animated gem;—when preceding his equipage, that to march on foot was an office distinguished by dignity;—that to speak to him, was as if on every side there were life and triumph;—and that to make every sort of obeisance, was a graceful attitude.
- 34. His brilliant conduct covered with glory, as if overspread by a coat of white plaster, now placed him on a level with these miracles,—the mansion of the king of snakes, ever illuminated by the moon—and the expanse of the atmosphere strewed with jasmine flowers. (23)
- 35. Though in greatness rivalling the luminary borne by seven horses, and capable of seeing beyond the seven seas, no man in this world could scan the ocean of his mind.
- 36. When his power was annihilated, dominion (*Dhrita-rashtra*) and prosperity were denied to the enemy—who poured forth those plaintive notes (*Gandhàri*) grateful as the warbling of a bird (*Sakuni*); who fainted at hearing the mangling by terrific (*bhishma*) crows (*Drona*) of the ears (*Karna*) and faces (*Asya*) of men (*Nara*)—and who was now conscious of that hero's valor and prowess (*Dharma prabhava*). This was strange. (21)
- 21. BHI'SHMA was the son of GANGA; his father was SANTANU: he was general of DURYODHANA, the opponent of his consin YUDHISTHARA. UPENDRA is a name of KRISHNA.
- 22. A passage in the Mahabharat is alluded to. Sivi was celebrated for his generosity; a bird demanded surrender of his prey which had taken refuge with Sivi. His offer of other food is rejected, and the victim or a piece of Sivi's own flesh insisted on. The just and generous king complies with the latter alternative. Puns again are perpetrated on the words pal and dwija, which signify a weight and a Brahman respectively, besides the senses taken in the translation. The partakers of Yaso Dharma Deva's liberality were Brahmans.
- 23. These are impossible events, something like Virgil's leaves inscribed with king's names.
- 24. A play on the words runs through this Sloka—Dhrita-Rashtra was husband of Gandhari, the sister of Sakuni. Bhisma, Drona, Kurna, and Narasya, are generals of Dhrista-Rashtra and his son Duryodhana. Dharma-Prabhava is a name of Yudhishtara, nephew of Dhrita-Rashtra. See Sri Bhagavat Purana. The ambignity is lost in the translation. Bhisma and the rest might be taken as the Cloanthi and Gyaantes of the enemy's army with less outrage to common sense.

- 37. What boots it that a ditch was dug by the sixty thousand royal sons of Sagar who devoted their lives; and that it was filled with water by his grandson and two other descendants in the first and second degree? Hearing the narrative of the origin of the sea (Sagar), he idly emulous made a vast undulating lake greater than the sea itself.(25)
- 38. Resplendent as the autumnal moon, as soon as that palace, which had bruised the horses' hoofs and shattered the chariot wheels, was seen by the charioteer of the sun, he swerved his car from its path,—that palace of which the golden ball, gave the idea of the solar disc kissing the summits of the snowy mountains, and constituted the delight of the household image of VAYKUNTA, the foe of demons.
- 39. Of that great king the chaste queen was NARMA DEVA, high-born, happy, and beloved on earth.
- 40. Even when injured she was always unresenting; but when benefited, lavish of her life; forgiving the arrogant, but never addicted to pride herself.
- 41. The queen bore to that god amongst men a virtuous and pure son, Banga;—just as Sachi bore Javanta to the Ruler of the Gods (Indra).
- 42. That best of men (Narottama) born in the race of Vrishni, the cleaver of the skulls of his foe, surnamed pure (Puta nama) imparted gladness to his encomiasts, (Yasodā 'nandatá) and adhered to peaceful pursuits. (26)
- 43. By that lion-like man, resistless in his anger, safety of life was never allowed to the robber of gold (*Hiranya Kasipu*).⁽²⁷⁾
- 44. "May it please your Majesty from this place to listen to the "lord of Kosala (Oude)?" "Lord of Kratha let the mandate be "quickly heard." "Oh Ruler of Sinhala (Ceylon) prostrate yourself, "and stand outside." "Speak chief of Kuntala, first putting up your "eloth to your mouth." Such were the words spoken by the door-
- 25. Allusion to the *Puranic* origin of the Ocean is made. Sagur had determined to reap the fruit of an *Aswa-Meddha*. The first stage of this is the release of the victim horse with a label. When fairly caught after battle with rivals he is slain, and the sacrificer obtains his vow. Indra alarmed for his throne had the labelled horse picketted in *Patdla*, in the centre of the earth, before the *Muni* Kapila. Sagar's sons baffled in their chase dug for the victim. Finding him, they abused the *Muni*, by whose curse they became ashes. By the successive austerities of Ansuman, Dilipa, and Bhagiratha, grandson, great grandson, and great great grandson of Sagar, the celestial Ganges was brought on earth, and filling the excavation, reanimated the ashes of their progenitors who ascended to heaven. The poet indicates that Yasodhurma Deva dug a great Tank.
- 26. A play on words pervades this stanza. It may refer to Krishna or Narottama, also called Putanama, who was the delight of Yasoda, his adoptive mother.
 - 27. The same Jeu de mots is kept up.

keepers to dismiss attending kings when he had retired into the female apartments.

- 45. "Who art thou?" "The beloved of Ka'shi's lord;" and thou? "The wife of the king of Andhra;" and thou? "The spouse of the chief "of Radha;" and thou? "The bride of the prince of Anga."—Such were the colloquies with the wives of his enemies detained as captives, while their lotus-like eyes were suffused with tears.
- 46. "Who art thou? of whom? and for what object art thou "come; thou who art resplendent as the luminary whose emblem is "the hare?" "I am gleaming fame; and wandering over the universe, "I am come, fervently anxious to behold the glory of the monarch "Banga, the sole friend of the learned, which has reached the crest of the vast mountain of Lokálok." (28)
- 47. Placed by Banga, after prostration made, that divine symmetrical *Linga* made of emerald, is victorious in this world. Worshipped by Indra, it was obtained from him by Arjuna, who had pleased him and brought by him on earth, and adored by Yudhishtara.
- 48. In the fane, a stone god put up by that king shews a second HARA, the remover of the bonds of pain.
- 49. By that King Banga was erected this fane of the lord Sambhu, the chief of the gods, with its summit, bright like the autumnal clouds; of which, by gliding near the golden cupola, (furrowing as it were the sky) Aruna, rendered radiant, abashed the crest of Meru. (29)
- 50. For the nice construction of its spire the skill of no mortal could have availed; Viswa Karma⁽³⁰⁾ himself must have turned this arch.
- 51. How this vast *Vata* tree surpasses!—A hundred times were given by him crores of golden coins, in quantities equiponderous with his body, by which they were weighed.
- 52. Enthusiastic in the true faith, and delighting to benefit others, seven high born *Brahmins* were located in palaces, reverenced by gifts of wealth, grain, and lands;—perfectly pure, though their bodies were tinged by smoke from ever-enduring sacrifice.
- 53. Two yavas at Sri-Brahma Kalpa; one in the vicinity. On the south of the snowy mountain, Kalpa gram was another.
- 54. Having ruled this earth, girt with waters as if by a girdle, and unsubjected to any other; when he had lived 109 autumns, with eyes closed, and (as ordained) fervently reciting the name of Rudra, the royal Banga obtained final beatitude by abandoning this mortal coil in the conflux of the Yamuna and Ganges.

^{28.} The Sun never reaches this mountain.

^{29.} Aruna is the Dawn, the charioteer of the Sun.

^{30.} The celestial architect.

55. Then did this glory of the world's lord attain perfection, when the wise priest Yasondhara, skilled in the redus, and the friend of the gods, here administered—according to law—scattering light on jurisprudence.

56. Born in the tribe of Twaxara, and in the family of Savara, was a poet called Sri Nandana, the prince of bards. To him was born a son, the illustrious Bal Bhadra, who had read through revealed law, and was powerful by the observance of religious austerities.

57. Of that Bal Bhadra, Sri Rama was the son; great as it were like a vast mountain,—of pleasing speech,—whose feet earthly kings adored,—exempt from sin,—and celebrated as the ocean of literature,—and skilled in elegant composition. By him composed, this incomparable panegyrie was published in the temple.

58. Who had learned the science of words,—by the sensible Kavastina Pasampala, distinguished by his race and disposition, the transcript of this panegyric was arranged. Here are no confused letters nor any obscure from rivalry.(31)

59. This temple of Pramatha Nath was constructed by the architect X19911A, virtuous, and a VISWA KARMA in science.

60. As long as this world with its mountains, cities, forests, its histories, memorials, and seas [shall remain]; as long as this sun shall shine; as long as water shall ooze from the luminary whose rays are cool; as long as the segment of the divine egg shall be fixed, that is expanded; so long let this temple, dedicated by the monarch to Siva endure,—mocking as it does mount Kailasa.

61. By the wise, and gifted Singha skilled in the science of writing, was this specimen of calligraphy engraved. Sambat 1019.

In the reign of Raja Banga, lord of the earth, this panegyric of the Emerald Image was finished.—

62. Afflicting even infuriated elephants,—by the abundant tears of the children and wives of his enemies (broken in the conflict of war) of that great king these lines became obliterated.

63. The king Jayavarma Deva (like an elephant supporting the universe) rewrote in clear letters the above verses, which he had before written in irregular letters (kirna). These letters, in the Kakuda form that Gauda Kayastha, aided by the learned, inscribed by the hand of Jaya Pal,—that Kayastha of untarnished lustre, having a numerous progeny, the radiant moon of the king's race, who, the dispeller of gloom, had risen from the ocean of polished literature.

Sambat 1173. Friday 3 Vaisakh (Sudi) bright half.

Prosodial Key.

A sloka, or stanza, consists of four padas, lines, or quarter slokas. They are generally, but not always, identical. Metre is Jati, or measured by matras, or instants. In this, one long syllable and two short syllables are equivalent. Or it is Vritta, seanned by defined feet.

The following slokas are *Jati* of the *Arya* species. First and third padas have 12 matras: seeond has 18; and fourth has 15 matras.

1. 4. 15. 20. 35. 41. 50. 51. 59. 62.

The other slokas are in the following metres, in which all four pada are identical.

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Slokas.
                                                                                     2. 3, 6· 9, 10, 12, 17, 24, 29, 33, 36, 37, 44, 46, 49, 52, 54, 57, 63.
Sarddula Vikriditam | - - - | 0 0 | 0-0 | 00- | --0 | --0 | --0 | --
Malini ..... | 050 | 000 | --- | 0_- | 0-- |
                                                                                         5. 19.
Mundacranta ...... | - -- | -00 | 000 | --0 | --0 | -- |
                                                                                         8. 27. 30. 45.
Rathoddhuta .... | ~0- | 000 | -0- | 0- |
                                                                                       14. 18. 22. 31
Vasantatilakam ..... | --0 | 200 | 020 | 020 | 22 |
                                                                                        16. 55. 34. 56.
Srugdhara ..... | --- | -0- | -00 | 000 | 0-- | 0-- |
                                                                                       23. 38. 60.
Vansasthavilam..... | 0-0 | --0 | 0-0 | -0- |
                                                                                       26. 40.
Hurini..... | 000 | 00_ | --- | -0- | 00- | 0- |
                                                                                       47.
                                                                                        58.
Sikhurini..... | 0-- | _ _ | 000 | 00_ | _00 | 0 _ |
Anush-tup.—This is a very common measure. Each Pada consists of four dissyllable feet: the third foot must be an Iambic, and the first syllable of the last foot is alternately long and short. The syllables of the remaining feet may be either long or short.
                                                                                       7. 13. 21. 25. 28. 32. 36. 42. 43. 48. 53. 61.
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ART. II.—Account of a Journey to Beylah, and Memoir on the Province of Lus. By Lieut. Carloss, Indian Navy.

On the 10th of January, having received an answer to a letter I had written to the chief of Lus, announcing my arrival at Soonmemy with a letter and some presents from the Bombay Government, I commenced my journey to Beylah. Two chiefs with a small party of followers had been sent to accompany me to the capital, but as they were not ready to proceed, and I did not wish to delay my journey, I started, accompanied by Dr. Hardy, without them.

The road for some distance led over a confused mass of low hillocks covered with loose sand, or across the low swampy hollows between them, and the country had every where a most barren and desolate appearance, there not being a tree or a bush to be seen. About five miles from Soonmemy we arrived at a ridge of sand hills, about 150 feet high, from the summit of which the Poorally river was visible to the W. N. W., with an extensive tract of thick mangrove jungle stretching along the left bank; at this place we halted for a short time

until the chiefs who were to accompany us made their appearance, and then continued our journey across a low flat plain, covered with saline bushes. About an hour after sunset having reached a spot where the land was higher, and water procurable, halted for the night. In the course of the evening many travellers had collected at this spot, and by the time we arrived forty or fifty had encamped about the wells, which are increly small holes dug at the foot of a high bank, yielding a scanty supply of brackish water. There was a Syud amongst them, a noted story-teller, who continued to entertain a large audience with his tales until the night was far advanced, and as he possessed a deep and melodious voice, the effect of the kind of recitative style in which they were chaunted was extremelypleasing.

On the following morning started for Layaree, a small town six miles distant, which we reached early in the afternoon. The level plain between the sand hills and Layaree is scored throughout with marks made by the passage of water, and overrun with saline bushes, intermixed here and there with patches of stunted tamarisk trees. Our attendants told us that the Poorally flows through this plain during the inundation, and pointed out the beds of two deep water courses through which the water escapes in the latter part of the season. The river, they said, had no decided bed from Layaree, where there is a bund thrown across it, to its mouth, a distance of about twelve miles, but discharges itself into the bay and harbour of Soonmemy by several outlets, through the low grounds near the sea coast.

Layaree is a small town, containing about fifty mud built houses, prettily situated in a grove of large baubool trees; there is a large tank near it filled by a canal from the river, and half a mile to the N E. is seen the small village of Charro, which is the residence of the darogah, or collector of taxes. At least a third of the population is composed of African slaves, who perform all the out-door labor. In my walks about the place I met several who complained bitterly of the treatment they received, and earnestly begged me to receive them on board the vessel, for they had determined to escape from their masters on the first opportunity. In the immediate vicinity of the town the country is open, and the ground laid out in fields, in which wheat, jowaree, cotton, and oil seed are cultivated. Farther off the land is overrun with high thick jungle, but in the small open spaces that occur here and there, is covered with grass, which although of a coarse kind, affords excellent pasturage for the flocks and herds.

Shortly after our arrival at Layaree, and before the baggage camels had come up, word was brought that a chief had just arrived from Beylah with Tceruthdass, the Jam's dewan, and wished to see me. As soon as a place had been prepared to receive them, by spreading

mats and carpets under the shade of a large tree, he came attended by a few armed followers, and delivered a complimentary message from the Jam, expressing his satisfaction at my visit. The chief was a little old man, with a strongly marked Arab countenance.

In the course of the conversation that ensued, I found they wanted me to remain at Layaree until they received further instructions from Beylah respecting my journey; but as this would have delayed me many days, I told them decidedly I should take it ill, if any objections were made to my proceeding immediately, and that on the following morning I should either continue my journey, or return to the ship. This seemed to puzzle them extremely, and they at last begged I would stop only one day, when they would be ready to accompany me, to which I agreed. In the course of the evening one of their attendants brought a quantity of rice flour, ghee, &c. for the use of the party.

13th. On sending to the chief to tell him I was ready to proceed, he said he should be detained a short time at Layaree to settle a dispute that had occurred there, and would join me at the next stage. At 10 started. For about three miles passed through cultivated grounds in which nothing but the oil seed plant was apparent, and then turning to the N. E. pursued a track leading along the bank of a deep dry nullah, running through thick tamarisk jungle: it extended several miles, and the trees were every where leafless and withered, with the exception of the small patches of undergrowth springing from their roots. As soon as we had got clear of the jungle we came upon an extensive tract of cultivated ground, watered by canals from the river, and dotted here and there with huts; at this place, where we halted for half an hour, the soil being good yields abundant crops of oil seed and cotton, and game is plentiful.

On resuming our journey, crossed a level plain thinly overspread with withered saline bushes, and extending as far as the eye could reach, apparently to the foot of the mountains on either side. We traversed it for a distance of eight miles, and after passing through an open jungle of tamarisk and mimosa trees, about five miles beyond it reached the Poorally river, and halted for the night. The distance from Layaree to this place is about eighteen miles. Here the Poorally is about 400 yards broad, and flows from east to west, which is a proof that we must have crossed its course before we arrived at Layaree, as our attendants asserted; the banks on both sides rise perpendicularly to a height of fourteen or fifteen feet, and a stream of water twenty yards broad and two feet deep pursues a winding course through the centre of its bed.

The morning of the fourteenth was extremely cold, the thermometer having fallen to 35° at day light. During the night the camels

had strayed some distance into the jungle, and the drivers being unwilling to go after them in the cold, became sulky and intractable when ordered to do so. This brought on a quarrel between them and one of the chiefs who attended us, which did not terminate until he drew his sword, and threatened to slay them on the spot if they did not immediately bring them in; frightened at his meaners, they departed in haste to look for their beasts, but so much time elapsed before they could be found, that we were not ready to start until near noon.

Having proceeded four or five miles across a level plain, thickly covered with low salt bushes, we came again upon the river, which at this place is joined by the Rahto, a stream of some magnitude, flowing from the mountains to the eastward; at the point of junction the bed of the Poorally is nearly a mile wide, and when full must form a fine sheet of water. The greater part of it is overrun with jungle, and the water meanders through it in two streams, about fifteen yards wide and as many inches deep. The soil is covered in many places with a thin saline incrustation, which from the taste appears to be natron. Two alligators were lying asleep on the bank a short distance from the place where we crossed.

On the opposite side of the river we met a finc-looking young man, mounted on a camel and attended by a few soldiers, who civilly stopped to salute us. He was a son of Arab Oosmanany, the chief of the Arab Gudoor tribe, and when he had been told that we did not understand the language, endeavoured to find out from the interpreter the object of my visit to Lus.

Late in the afternoon we reached Oot, two small villages about five miles from Beylah. During this day's journey the road gradually inclined toward the western range of mountains, and we had passed through a level country, alternately overrun with saline bushes or thick jungle. We were now not far from the head of the valley, which is encircled by high mountains, and numerous thin columns of sand were visible in every direction, caused by the eddying currents of wind sweeping out of their recesses. They moved over the plain with great rapidity, and whenever one came near us, I could hear the chief who guided my camel mutter to himself, "Pass away from the road good demon, and do us no harm; I am only going to Beylah with the English gentlemen who have brought presents for the Jam." Amused with this odd request, I asked him the meaning of it, when he told me with great gravity that we were now in the territory belonging to the ancient city Shuhr Roghun, once the favorite residence of the fairy Baddul Jamaut, and that these columns were demons who had since taken possession of it, to whom it was necessary to speak sweetly to prevent them from playing us any tricks.

Oot consists of two small villages belonging to Arab Oosmanany, the chief of the Arab Gudoor tribe, one containing about 50 and the other 25 houses. The baggage not having come up, the carpets were spread under the shade of a large tree, and we were quickly surrounded by the whole population, to whom our dress and appearance seemed to afford considerable amusement. Arab Oosmanany, the chief, was at the village waiting to conduct us to Beylah; and being informed of our arrival came to pay us a visit, the whole of the villagers having been previously summoned to compose his retinue. In the course of conversation, I told him that amongst the presents there was one for him, which he begged might be delivered in the presence of the Jam. In the evening he sent us a sheep, with a quantity of flour, rice, ghee, &c., and requested we would let him know if we wanted any thing else.

At noon next day the Kossid who had been dispatched to Beylah the night before, to announce our approach, having returned, we left Oot accompanied by Arab Oosmanany and a small party of military followers. For the whole distance the road passed through a succession of cultivated ground, interspersed with small thickets composed of a high bushy tree which appears something like the willow. As we left Oot we met ten or twelve hideous looking beings dressed as women, and mounted on donkeys, who saluted us as they passed; from their peculiarly disgusting appearance and bold manners, I was induced to inquire of my companion who they were: he laughed, and said they were eunnelis. Descending by a deep irregular water course into the dry bed of a river flowing from the N. E. and about 700 vards broad, we crossed it and entered Beylah. On approaching the town the housetops were seen literally covered, and the streets thronged with people: as we entered it the crowd set up a wild shout, shricking and hallooing with all their might, and created such a dust that I was almost snffocated. The ladies also favoured us with a shrill scream, but whether of welcome, admiration, or disgust, I could not exactly make ont. The young Jam, we were told, was amongst the spectators. Arab Oosmanany turned off to the palace to report our arrival, and we were conducted to a house which had been prepared for our reception; it was a most wretched dwelling, but with the exception of the palace, as good as any other in the town. The people crowded into the outer room without ceremony, and although the Jam had sent six soldiers to keep them out, they found it impossible to do so, and I was at last obliged to turn every one out myself and fasten the door: whenever it was opened a general rush was made, and some hard fighting took place between the gnard and the mob before the latter could be driven back. of the principal inhabitants confiding in their rank, rudely walked into

the inner apartment where we were sitting, but they were soon made sensible of their mistake by being immediately turned out of the house, and told that whoever wished to see us, must first ask and obtain permission.

About two hours after our arrival one of the chiefs brought a complimentary message from the Jam, but the real object of his visit it appeared was to ascertain precisely my rank, which having done, he departed; shortly after Arab Oosmanany came alone, and informed

me that the Jam would give me a public audience next day.

Late in the afternoon a chief came to conduct us to the house where the Jam was waiting to receive us, but no horses having been sent I requested him to go back and get three, which in a few minutes made their appearance. Preceded by the presents, and attended by a party of soldiers, we proceeded through the town, and after having passed with some difficulty through several narrow streets, filled with a crowd of people, shouting as if they were mad, alighted at the door of the Kutchery, which, from the dense mass collected round it, was hardly approachable; on entering the court-yard we were received by one of the chiefs, who taking me by the hand led me towards a covered veranda, or room open in front, where the Jam was seated in state; although the hall of audience was merely a rude mud building, without ornament or furniture of any kind, the coup d'el was rather imposing, the group drawn up inside being arranged so as to produce the best possible effect. In the centre sat the young chief, on a square platform raised about a foot high, and covered with a carpet and eushions of silk richly embroidered. His relations and chiefs were disposed on either side according to their rank, Ularacky, his chief confidential adviser being seated on his right hand a little in advance, and his tutor, the Hadgi Hafiz, on his left, and the back ground was filled up by a body of well dressed, fine looking military retainers. My eonductor having led me up to the musnud, the Jam desired me to sit down on a carpet laid in front of it, and the usual complimentary speeches and inquiries were made by the minister Ularacky, who conducted the whole business. During the time the interview lasted, the young chief, who I imagine had been well tutored for the occasion, sat without uttering a word, with a vacant incurious expression of eountenance which was no doubt assumed. He is a handsome lad, of thirteen or fourteen years of age, with fine expressive eyes, rather fair complexion, and a profusion of long jet black ringlets falling on each side his face. At present his countenance is rather feminine, and when we saw him in his state robes, which from their peculiar fashion aided the resemblance, he appeared more like a young Indian queen

than the chief of a wild tribe of Noomrees. He wore an under dress of crimson and gold kincaub, with trowsers of striped silk, and over this a mantle of pale blue satin richly embroidered with gold and silver thread, colored silk, &c., in the pattern peculiar to the Cashmere shawls. His turban formed of splendid kincaub was extremely large, and adorned with a feather of open gold work, set with emeralds, sapphires, rubies, &c. and another ornament richly set with jewels similar to what I believe is called in Europe a sevigni, from which hung several strings of large pearls. A gold-hilted sword, with a shield ornamented with chased gold knobs lay before him, and completed his equipment. After the presents had been exhibited, which appeared to excite the admiration of all present, I took leave, and attended as before by a party of soldiers, amongst whom I distributed a few rupees, as is customary on these occasions, returned to the house.

During the week I remained at Beylah I had several long conversations with Ularacky, the Jam's minister. Ularacky is the second chief of the Jamootry, the particular tribe to which the Jam belongs, and has been chosen by the Jam's mother in consequence to conduct the government of the province under her superintendence; he is a fine intelligent old man, without any of the prejudices against Europeans which generally exist in the minds of those natives of India who have had no intercourse with them; but being surrounded by chiefs belonging to the other tribes, who are jealous of his influence with the reigning family, he is obliged to act with the greatest caution.

Beylah contains about 800 houses constructed of sticks and mud, and between four and five thousand inhabitants; it covers a small piece of elevated ground rising above the banks of a river of some size, flowing from the N. E. which joins the Poorally about a mile farther to the westward, and with the exception of the N. E. quarter, which is surrounded by a ruinous mud wall, is entirely undefended. The palace of the Jam is within the walls, and is the only brick building in the place. About Beylah a large portion of the land is under cultivation; and the face of the country presents a pleasing succession of grassy plains and small woods, which with the advantage of being placed nearly at the junction of two rivers, and at an equal distance from the mountains on either side, renders it the best spot in the province that could have been selected for the site of the capital. The Poorally passes about a mile to the westward of it, and spreading over a large extent of surface forms several swamps, which are fed by numerous springs; in some of them rice is cultivated, and the ground about their banks is every where much broken by deep gullies worn by the water flowing into them in the rainy season.

Ularacky having communicated to me the decision of the durbar respecting the survey of Soommemy, and finding the Jam's answer to the Government letter would not be ready for two days, I determined to employ the interval in visiting Shuhr Roghan, an ancient excavated city, situated amongst the mountains to the northward; on stating my wish to Ularacky, he at last obtained the requisite permission from the Jam's mother; who as a compliment, sent one of her confidential attendants with her son's state-matchlock to accompany me.

Beyond the town the road for some distance wound through a thick wood occupying the bed of a deserted river; here and there it opened out into small but picturesque glades, but in general the underwood was so dense, that we had some difficulty in making our way through it: the bushes were full of birds, amongst which I noticed several parrots, and a very pretty little bird with green and golden plumage: it was decidedly the most beautiful spot I had seen in the province. On ascending from the bed of the river we came upon an open plain thickly covered with large rounded stones, and cut up in every direction by deep water courses, and about four miles from the town crossed the dry bed of a river about 500 yards wide; a short distance beyond it is situated the small village of Momadary surrounded by fields, and to the eastward a grove of lofty trees was visible, where my attendants said the Jam had a large garden. From Momadary to the head of the valley the stony plain is thinly dotted with bushes, and every where deeply furrowed by channels; this part of the valley rises slightly to the foot of the hills, and from its appearance, must have water flowing over its surface in the rainy season, towards the Poorally, from one range of mountains to the other.

About nine miles to the northward of Beylah, a range of low hills sweeps in a semicircle from one side of the valley to the other, and forms its head. The Poorally river issues from a deep ravine on the western side, and is about 200 yards broad; it is bounded on one side by steep cliffs, forty or fifty feet high, on the summit of which there is an ancient burying ground, and the water runs bubbling along it in two or three small rivulets, amongst heaps of stones and patches of tamarisk jungle. Having crossed the stream we pursued our way up its bed amongst the bushes, until we gained the narrow ravine through which it flows, and then turning into one of the lateral branches entered Shuhr Roghan. The scene was singular; on either side of a wild broken ravine the rocks rise perpendicularly to the height of four or five hundred feet, and are excavated as far as can be seen; in some places where there is footing to ascend, up to the summit; these excavations are most numerous along the lower part of the hills, and

form distinct houses, most of which are uninjured by time; they consist in general of a room fifteen feet square, forming a kind of open veranda, with an interior chamber of the same dimensions, to which you gain admittance by a door; there are niches for lamps in many, and a place built up and covered in, apparently intended to hold grain. Most of them had once been plastered with clay, and in a few, when the form of the rock allowed of its being done, the interior apartment is lighted by small windows. The houses at the summit of the cliffs are now inaccessible, from the narrow precipitous paths by which they were approached having been worn away; and those at the base appear to have been occupied by the poorer class of inhabitants, for many of them are merely irregular shaped holes, with a rudely constructed door. The rock in which these excavations have been made, is what I believe is called by geologists Conglomerate, being composed of a mass of rounded stones of almost every variety of rock, embedded in hard clay; it contains a large quantity of salt (I think natron), which is seen in a thin film on the walls of all the chambers, and at two or three spots in the upper part of the ravine, where water drops from the overhanging crags.

It would be singular if such a place as Shuhr Roghan existed amongst a people so superstitious as the Noomrees without a legend of some kind being attached to it, and they accordingly relate the following story: In the reign of Solomon the excavated city was governed by a king celebrated all over the East for his wisdom, and the great beauty of his only daughter Buddul Tumaul; she was beloved by seven young men, who from the great friendship existing among them, were called by way of distinction "the seven friends," but they perished one after the other in defending the object of their adoration from the designs of half a dozen demons, who, attracted by her surpassing beauty, made repeated attempts to carry her off. At this interesting period of her history Syful Mullik, son of the king of Egypt, arrived at Shuhr Roghan, who being the handsomest man of his time, and as brave as he was handsome, had been dispatched by his father on his travels, in the hope that by the way he might conquer a few kingdoms for himself. The princess, as a matter of course, fell in love with him; the demon lovers were in despair, and made a desperate effort to carry her off when at her devotions, but were all slain in the attempt by the prince. The father of the fair princess rewarded him for his gallantry with the hand of his daughter, and the happy couple lived to reign for many years in peace and security over the exeavated city. Such was the tale related to me by my attendants, which forms the groundwork of a story written in the Persian

language, entitled, "The Adventures of Syful Mullik with the Fairy Buddul Tumaul." I obtained a copy of the work at Kurachec.

A short distance above the entrance of the city, the broken precipitous ravine in which it is situated decreases in width to ten or twelve yards, and forms a deep natural channel in the rock. For about half a mile the cliffs are excavated on both sides to a considerable height, and taking the remains of houses into account, I think there cannot be less altogether than 1500. In one place a row of seven, in very good preservation, was pointed out by the guides as the residence of "the seven friends," and further on we came to the grandest of all, the palace of Buddul Tumaul. At this part, the hill, by the abrupt turning of the ravine, juts out in a narrow point, and towards the extremity forms a natural wall of rock about 300 feet high, and twenty feet thick; half way up it had been cut through, and a chamber constructed, about twenty feet square, with the two opposite sides open; it is entered by a passage leading through a mass of rock partly overhanging the ravine, and on the other side of the apartment two doors give admittance to two spacious rooms; the whole had once been plastered over, and from its situation must have formed a safe, commodious retreat. At the summit of the hill near it there is another building, which my attendants said was the mosque where the princess was rescued by Syful Mullik, when the demons attempted to carry her off. Having seen every thing worthy of notice in this troglodytic city, we quitted it, and returned to Beylah.

On the 21st the letter and presents for Government having been delivered to me by Ularacky, I left Beylah late in the afternoon, and on the evening of the 24th arrived at Soonmemy. On the road we met a party of fakeers proceeding to Hinglaj: they presented a most grotesque appearance, their faces besmeared with paint, and their ragged garments decorated with tufts of feathers, and a variety of irregular ornaments. Their agna, or chief, who was a portly, well-dressed personage, marched at their head, and carried a long white wand as the badge of his office. These poor wretches had collected from all parts of India, and as we approached them they set up a loud shout, exclaiming "Hurrah for the holy saint of Hinglaj—we are going to visit our good grandmother—praises to Kalee, the holy goddess! hurrah, hurrah."

Hinglaj, the shrine to which they were proceeding, is situated about a day's journey from the sea-coast, at the extremity of the range of mountains dividing Lus from Mukran, and is said to be of great antiquity. The temple is merely a small building erected on one of the mountain peaks, and is held in great veneration by both

II indoos and Mussulmen. It is dedicated to Kalee, the goddess of fate, and there is a large circular tank or well near it, which the natives say has been sounded to a very great depth, without bottom having been obtained; they relate that one of the priests employed himself for a whole year in twisting a rope for the purpose, but it was not long enough. Those who can swim, jump into the tank from an overhanging rock, and proceed through a subterranean passage to another part of the mountain, which is believed to purify them from their sins. There is also a species of divination practised by throwing a cocoanut forcibly into the water, and according as the bubbles rise in a larger or less quantity, the individual will be happy or miserable. This account of the place, which is celebrated all over India, was furnished by people who had been there several times.

Memoir on the Province of Lus.

The small province of Lus is about 100 miles long by 80 broad, and is bounded to the south by the sea, to the north by the Jahlawan hills, and to the east and west by ranges of high mountains, which descend from the great mass occupying Beloochistan, and separate it from Sinde and Mukran. Besides these, which terminate on the seacoast (one at Rus Mooaree, and the other 100 miles further to the westward, near Rus Arubah) there is another spur sent off from the Jahlawan hills, called Jebbal Hahro, which runs down the centre of the province nearly to the coast, and divides it into two unequal portions. These three ranges are all of the same formation, principally coarse sandstone, and of the same average altitude, each being about 3000 feet high.

The climate of Lus is subject to considerable variation; in the winter season it is delightful, the atmosphere being clear, dry, and cool, but in the summer months it is as disagreeable from the excessive heat. During my journey to Beylah, in the month of January, the thermometer stood at 35° for three mornings running, and it did not rise higher than 67° even in the hottest part of the day. Situated just without the limits of the south west monsoon, and nearly encircled by high mountains, which not only reflect the sun's rays, but exclude the wind, the heat in the summer season is intense; and although the atmosphere is occasionally cooled by refreshing showers, it is severely felt by the inhabitants.

The western division of the province, lying between the Hahro and Hinglaj mountains, is the smallest and least productive of the two The greater part is occupied by a mass of barren hills, with small valleys between them; and the remainder forms a level sandy district near the sea, which in most places is barren and almost destitute of inhabitants.

The eastern division of the province is watered by the Poorally and its numerous tributaries, and the only productive part of it is the valley or plain through which that river takes its course. From the sea to the Jahlawan hills it measures about sixty-five miles in length, and in width decreases gradually from thirty-five miles; its breadth on the coast as you approach its upper extremity, where it terminates in a semicircle of hills, is eight or nine miles across. With the exception of a belt of low broken hillocks on the sea coast, about eight miles broad, the whole face of the valley is perfectly flat, and it is to this circumstance the province owes its name of Lus, and which in the language of the country signifies a level plain. On looking down it from the upper extremity, where the ground rises slightly at the foot of the hills, the horizon appears of a misty blue color, and is as level and well defined as it is at sea: the only clevated spot I saw, was the rising ground on which Bcylah is built, and that is not more than ten or twelve feet high. There is a tradition amongst the natives, that at a remote period the valley was an inlet of the sea, and from its extreme flatness, alluvial formation, and small elevation above the level of the ocean, there is reason for believing it was once the case.

The soil is every where alluvial, and is composed of a light loose clay mixed in a greater or less proportion with fine sand; in some places it preserves a hard smooth surface, and contains a portion of saline ingredients, but in others crumbles into fine dust, which is blown in clouds by the lightest breeze, and renders travelling very disagreeable; it is also in many parts encumbered with large rounded stones, and at the head of the valley above Beylah, where there are numerous streams and water courses, they are so thickly strewed over the surface, that the whole plain, from one range of hills to the other, appears like the bed of a large river. Near the coast there is scarcely a tree or a bush to be seen, and the country has a most barren and desolate aspect. A eonfused mass of undulating hillocks, 80 or 100 feet high, covered to some depth with loose sand and thinly overrun with creeping plants, extends about eight miles inland, and in the small hollows and plains between them, which are so low as to become saturated at high tide by the sea, the land produces nothing but saline shrubs or coarse reeds. Beyond the sand hills the level plains commence, and small patches of stunted tamarisk trees appear here and there; but as you approach Layaree they attain a greater height, and the jungle becomes dense.

From that village to Beylah the face of the country every where presents the same appearance in its general features, and in the vicinity of the different streams a large portion of the land is under cultivation; but beyond these spots it is either covered with saline bushes or thick tamarisk jungle, and from the poverty of the soil would not yield sufficient to repay the cultivator for his toil in clearing it. In some of the jungles the baubool (mimosa) is abundant, and in others the trees are withered and leafless for miles, and there is no sign of vegetation, save in the undergrowth beneath them. About and above Beylah the tamarisk and baubool almost entirely disappear, and are succeeded by a tree which from a short distance appears like a species of willow, and is so high and bushy, that at those places where it abounds it forms thick and extensive woods; game is every where plentiful, but particularly so on the eastern side of the valley; herds of antelopes and spotted deer are frequently seen in the open country, and the wild hog is sometimes found in the thickets; the jungles are full of hares and partridges, and the lakes and swamps swarm with water fowl of every description.

On the banks of the Poorally and its tributary streams a large portion of the land is under cultivation; and this is also the case along the eastern side of the valley, where there are several small lakes left by the waters of the inundation: at these spots the soil is a rich mould, and yields abundant crops of wheat, jowaree, oil seed, cotton, and esculent vegetables. In the dry season most of the fields are irrigated by cuts from the rivers, but some depend entirely upon the rains for a supply of water;—on the former a tax is levied of one-third, and on the latter of one-fifth of the produce.

The principal river of Lus is the Poorally, which rises to the northward amongst the Jahlawan mountains, and issues upon the valley through a deep ravine about nine miles to the N. W. of Beylah; on leaving the hills it flows in several rivulets along a bed 300 yards wide, but near Beylah it increases to nearly a mile in breadth, and the water spreading over a large extent of ground forms a succession of swamps; amongst these there are many small springs, and part of the land is turned to account in the cultivation of rice. Above Beylah the plain up to the foot of the hills is every where deeply scored with the beds of rivulets and water courses, but they are only filled during the inundation months, and then empty themselves into the Poorally. The first tributary stream of any size flows from the mountains to the N. E., and passing close along the clevated ground on which the capital is built, joins the river below the swamps; opposite the town it is 700 yards broad, and when I crossed

it in the month of January its bed was perfectly dry. From the junction of this stream the river pursues a winding course to the southward, and has an average breadth of 400 yards; at some places however it is much wider, especially at the confluence of the Khato, a large stream descending from the eastern range of mountains, where it is nearly a mile across, and when full, must form a fine sheet of water: here its bed is overrun with jungle, and the stream winds through the centre in two small rivulets, 15 yards broad, and 15 inches deep. The Khato is from three to five hundred yards broad, and is only filled in the rains. Four miles to the N. E. of Layaree the Poorally receives the water of the Hubbe, a river of some size flowing from the eastward, and below the point of junction is confined by a dam or bund, to retain its waters in the dry season for agricultural purposes. From this spot to its mouth it has no bed; as the river fills during the rains the bund is swept away, and the water escapes through a level plain covered with bushes, about five miles broad, which it inundates to a depth of two or three feet. This plain is bounded by the sand hills on the coast, and extends in a winding direction to the mouth of the river, which is situated at the head of the harbour of Soonmemy, and only runs four or five miles into the land. The water also finds another outlet through a line of lakes and swamps on the eastern side of the valley, where the ground is very low, and reaches the sea at a large lagoon on the shores of the bay, a few miles below the harbor. Serundo, the largest of the swamps, is several miles in length and very irregular in shape; its width in some places exceeding a mile, and at others contracting to four or five hundred yards. In the dry season, when it has a depth of four or five feet, the water is salt and charged with vegetable matter from the thick mangrove jungle growing along its banks, but during the inundation it is perfectly fresh, and the swamp then assumes the appearance of an extensive lake. Water fowl of all kinds resort to it in incredible numbers, and alligators are almost equally abundant.

The water of the Poorally holds in solution a large quantity of saline ingredients, and every stone in its bed that is at all exposed to the influence of the sun is covered with a thin incrustation. As far as I could judge from the taste it is natron, and the flavor of the water is scarcely affected by it. In the swampy parts of the river near Beylah alligators are numerous, and they are met with here and there throughout its course.

In the whole province there are not more than ten or twelve towns or villages, and the largest of these, Beylah, does not contain more than 5,000 inhabitants; Soonmemy has not half that number, and

Ootul, a town situated on the eastern side of the valley, which ranks next in importance, scarcely a fourth; Lavaree, Oot, Momadary, and the others, are small villages of thirty or forty houses each, part built of mud, and the rest of mats, and none have more than 150 or 200 inhabitants. The people generally are scattered over the face of the country, and have no fixed habitations; their huts are erected whereever there is pasturage for their cattle, and being constructed of stakes and reed mats, are easily removed to other spots when the supply of fodder is exhausted. Beylah, the capital, is built upon a rising ground, on the north bank of a small river flowing from the mountains to the north-east, which joins the Poorally about a mile to the westward of the city. It contains about 800 houses built of mud, and a population of The palace of the Jam is situated in the northabout 5000 souls. east quarter, and this part of it is surrounded by a mud wall of no great strength, which is the only defence of the place.

The productions of Lus, are grain, (chiefly wheat, and jowaree) oil seed, a kind of gram called gogur, and cotton; ghee is made in large quantities, and sent to Kurachee or Soonmemy for exportation, and the flocks furnish a small supply of wool:—cotton cloth, with the coarse woollen dresses worn by the peasantry, and coarse carpets made at Beylah, are the only articles manufactured in the country.

It is difficult to form an estimate of the amount of the population, from the people being so much scattered over the face of the country, but I do not think it exceeds 25,000 souls. It is composed principally of Noomrees, descendants from the ancient Summa and Soonvia Rajpoots, whose chiefs formerly ruled in Sinde, and who are divided into seven tribes-the Jamootry, Arab Gudoor, Shooroo, Boorah, Shukh, Warah, and Mungayah. The Arab Gudoor is said to be a branch from the celebrated Arab tribe the Korcish, and to have settled in Lus in the reign of the third caliph Omar. That the family of Arab Oosmanany, the chief, is from an Arab stock is evident, for in him and all his relatives the Arab form and features are strongly marked, but the resemblance is not visible in the tribe generally, and it is no doubt of Noomree origin. The Jokeeas, and Jukreeas, who are also Noomrces, and inhabit the mountainous country to the castward, were also formerly subject to the chief of Lus; but when Kurachee was taken by the Scindians they threw off their allegiance, and have ever since acknowledged the authority of the Ameers. Besides Noomrees there are also many Hindoos, and a large number of African slaves: the latter perform all the work. The chiefs and a few of their military followers are robust, and good looking men, but the Noomrees generally possess few of those qualities, either physical or moral, which would entitle them to

be considered a fine race. Amongst the lower orders mixture of the different castes and tribes is observable, and a large number exhibit marks in their features of their African descent. In appearance and bodily strength the men are inferior to the inhabitants of most Asiatic countries, and they are ignorant, indolent, and superstitious. The women possess few personal charms even when young, and are remarkable for their bold and licentious manners. The dress of both sexes is much the same as it is in Sinde, and there is in fact a marked resemblance, both in character and appearance, between the people of the two countries.

Jam Meer Mahomed, the chief of Lus, is about fourteen years of age, and does not at present take any part in the government of the province, which is conducted by Ularacky, the chief of the Jamootry, under the direction of his mother. Jam Deenah, his cousin, is the only male relative he has; he is about forty years of age, and much liked by the people for the kindness and generosity of his disposition. The Jam's sister was married some years ago to Meer Sobdar, one of the Sinde Ameers, and it is settled that when he is of age he is to espouse one of that prince's sisters in return. He has also a half sister in the harem of Meerab Khan, the Kelat prince, and another married to the chief of the Jokeeas. The mother of these two girls resides at Soonmemy and is in such a destitute condition that she has lately been obliged to sell her clothes and jewels to obtain the necessaries of life.

The Jam is not independent, but like all the Brahooey chiefs, holds his dominions under the feudatory tenure of furnishing a certain number of troops when required for the service of his lord paramount, the sovereign of Kelat. The Jam's father was formerly obliged to send him a portion of the duties collected in his territories as a yearly tribute, but after his marriage with one of the prince's daughters, this was no longer demanded. At present the Jam is kept in complete subjection, for his small state is every where exposed to the attacks of the Brahooey tribes, who if commanded by the Kelat chief would quickly overrun it; and he would not in consequence dare to disobey any order from that prince, or act in any business of importance without his sanction. The number of troops he is expected to bring into the field in time of war was fixed at 4500; but at present the whole military force of the province does not exceed 2700 men, which are furnished by the different tribes in the following proportion:

Jamootry,		• •			 600
Arab Gudoor,					 600
Shooroo,					 200
Boorah,					 300
Shukh,					 100
Warah,					 100
Mungayalı,	• •				 300
Brahooeys,		• •		• •	 500
			40		
			Total,		 2,700

Since the death of the Jam's father, who expired about eight years ago, the revenues of the province have decreased considerably, and do not now amount to more than 35,000 Rupees annually. They are derived from a duty of three per cent. levied on all imports and exports, and a bazar toll of one per cent. collected at the towns they have to pass through on the road to Beylah. There is also a land tax of one-third the produce on all grounds irrigated from the rivers, and one-fifth on those which depend solely upon the rain for a supply of water. Last year the revenue collected at the different towns was as follows:

At Soonmemy,	• •			Rupees,	12,000
At Layaree,					2,000
At Ootul,		• • 1			3,000
At Beylah,					9,000
At Oomarah,		• •			1,000
Land tax,	• •		• •		8,000
			Total,	• •	35,000

Soonmemy is the principal sea-port of Lus, and for such a miserable looking place possesses considerable trade. The town generally called Meany by the natives is mean and dirty, and does not contain more than 500 houses; they are built of sticks and mud, and have a small turret rising above the roof open to the sea breeze, without which they would scarcely be habitable in the summer months, on account of the excessive heat; formerly the town was surrounded by a mud wall, but as no pains were taken to keep it in repair it gradually fell to deeay, and now scarcely a vestige of it remains. It contains a population of about 2,000 souls, most of whom are employed in fishing, and are extremely poor, and there are besides a few Hindoos who have the whole trade of the place in their hands. At Meany the water is extremely bad. I examined all the wells in the neighbourhood, and caused others to be dug in the most promising spots, but it was so brackish that it was not drinkable, and I was obliged to send to

Kurachee for a supply for the vessels. The harbour, which has been formed by the Poorally river, is a large irregular inlet spreading out like that at Kurachee in extensive swamps, and choked with shoals; the channel leading into it is extremely narrow, and has a depth of sixteen or seventeen feet at high water in the shallowest part, but it shifts its position every year, and vessels of any size could not navigate it without great difficulty, until it had been buoyed off inside. There is six or seven and even ten fathoms in some places, but towards the town the channels become shallow, and the trading boats cannot approach it nearer than a mile; at the spot where they anchor they are always aground at low water. During the south-west monsoon the harbour cannot be entered, for the bar at the entrance is exposed to the whole force of the swell, and the breakers on it are heavy. There is another small sea-port belonging to Lus, situated on the western side of the Hinglaj mountains, at Ras Ambah, it is called Ournarah, and is the place to which the productions of the western division of the province are sent for exportation.

The total value of the trade of Lus does not exceed five lacs of rupees; the imports are—from Bombay, cloths, silks, iron, tin, steel, copper, pepper, sugar, and spices; the Persian Gulf, dates and slaves; and from Sinde, a small quantity of coarse cotton cloth. The greater part of the articles brought from Bombay are sent to Kelat, for although highly prized in Lus the people are too poor to purchase them, and they receive in return wool, of which 800 candys arrived in the course of last year, and different kinds of dried fruits. The exports, are—grain (principally wheat and jowarce) ghee, wool, oil seed, and a quantity of gum; a duty of three per cent. is levied on all imports and exports, which may be paid either at Soonmemy or Beylah, and a bazar toll of one per cent. at Layaree and Ootul, two towns on the road.

Most of the articles imported from Bombay are sent to Kelat, and from that city distributed throughout Beloochistan; the quantity is very small for the supply of such an extensive kingdom, and is not likely to become greater until the Kelat prince takes measures to prevent the caravans from being plundered in their route from Beylah to his capital. The intermediate districts are inhabited by various Brahooey tribes, such as the Mingulls, Bezinyas, &c. and to each of the chiefs, the merchant has to pay from one to four rupees for the camel load, as may be determined at the time; their followers also frequently pillage the caravans. Mecrab Khan, the Kelat prince, has no doubt the power to repress these outrages, and he would certainly interfere to prevent them, if the advantages that would accrue to

himself from the increase of the trade, were pointed out in a favorable manner. All the merchants of Lus are of opinion, that the commerce would be considerably enlarged if security were afforded to the trader, and of this there can be little doubt, for cloth and other articles of European manufacture are in great request throughout Beloochistan, and the supply is not at present adequate to the demand.

Formerly the commerce of Lus was much more valuable than it is at present, and a large portion was sent by the Kelat route to the northern provinces of Hindoostan; within the last forty years it has from various causes gradually declined. In 1808 Soonmemy was taken, and plundered by the Joasmy pirates, and for some years the merchants were afraid to send goods there; the port was just beginning to recover from this blow, when the Ameers of Sinde issued strict orders to the merchants of Kurachee to discontinue their practice of importing goods to any of the ports of Lus under the severest penalties, and this measure, which at once took away half the trade of the place, completed what the pirates had begun. In the meantime the trade with the northern provinces had ceased entirely, for they had become so unsettled that the Patan merchants, who are the great carriers in that part of the world, ceased to come to Kelat for goods, and as they afterwards found the route from Upper Sinde much the safest, they resorted to it in preference, and have since obtained the small supply of goods they require from the merchants of that kingdom. Before the trade of Lus had suffered from the causes above mentioned, its value is said to have been five times greater than it is at present, and it was also much more lucrative to the merchant, for at that period goods of European manufacture sold for double the price that is now obtained for them.

1st February, 1838.

T. G. CARLOSS,

Lieutenant, Indian Navy.

ART. III.—On three new species of Musk (Moschus) inhabiting the Hemalayan districts.

To the Editor of the Journal, Asiatic Society.

Sir,—Several years ago I called the attention of Dr. Abel to some remarkable, and apparently permanent distinctions of colour characterising the Musks, or Musk Deer of the Cis and Trans Hemalayan regions. These I subsequently inserted in my amended catalogue of *Mammalia*, under the specific names of *Leucogaster*, *Chrysogaster*, and *Saturatus*, but without giving specific characters, owing to my conti-

nued inability to establish the species upon a more solid basis than that of distinction of colour. The partial investigations which I have been enabled to make, strongly favour, however, the supposition that the superficial diagnostics are supported by others of more importance in the form of the erania, and in the structure and position of the musk pod. And, though I am still unable distinctly to expound these latter differences, I think it may stimulate curiosity to indicate summarily the three presumed species as marked by their diversities of colour, in the hope that attention may be thence drawn to the structural peculiarities which I believe to exist in the sculls, and in the musk bags.

1st. Species, Moschus chrysoguster, nobis. Bright sepia brown sprinkled with golden red; orbitar region, lining, and base of ears, whole body below, and insides of the limbs, rich golden red or orange; a black-brown patch on the buttocks postcally; limbs below their central flexures fulvescent.

2nd. Species, *Leucogaster*, nobis. Body above, and the limbs deeper brown sprinkled with fulvous: below the head, neck, and belly, together with the insides of the ears, and the orbits, hoary white.

3rd. Species, Saturatus, nobis. Throughout saturate dusky brown, somewhat paler below: ehin only, and lining of the ears pale and hoary.

Drawings of the above animals were transmitted to London, through the Society, in May 1836.

I am Sir, your obedient servant,

B. II. HODGSON.

Nepal, April 15, 1839.

ART. IV.—On Isinglass in Polynemus sele, Buch., a species which is very common in the Estuaries of the Ganges. By J. McClelland, Assistant Surgeon.

There are nine species of *Polynemi*, or Paradise fishes, enumerated by anthors, and although they are all pretty well described, I am not aware of any more valuable property being known regarding them than their excellence as an article of food, of which we have a familiar instance at this season in the *Pol. paradiseus*, or Mango-fish, *Tupsi Muchi* of the Bengalese.

Buehanan has five species in his work on Gangetic Fishes, but three of these are small, and probably varieties only of the *Tupsi*; two of them however, are of great size, and so eommon in the estuary of the Hoogly that I have seen numerous hackeries, or bulloek earts, conveying them to the Calcutta bazar, during the eold season. They are not

confined to the estuary of the Hoogly, but probably extend to all the estuaries of the Ganges, as Buehanan says they do; and we know that Dr. Russell also describes two large species in his work, long since published, on the fishes of the Madras Coast.

The very valuable production, *Isinglass*, having been recently found to be yielded by one of the fishes of the Hoogly by a writer in Parbury's Oriental Herald, it became an interesting object to determine the systematic name of the fish affording an article so valuable, and to learn as much as possible regarding its habits. Having procured a specimen of this fish from the bazar, I was surprised to find it to be a *Polynemus*, or Paradise fish, although the writer alluded to described it as resembling a Shark. My surprise was not that a person unacquainted with fishes should compare it to a Shark, or to any thing else, but that a nearly allied species to the Mango-fish should contain a natatory vessel of such size and value, while that organ is quite absent in the Mango-fish itself, though a general character of nearly all others.

I had come to the determination never to describe single or detached species of fish, but as the object of this paper is to elucidate the commercial side of a question already before the public, I shall not pretend to offer any remarks on the scientific part of the subject, which is indeed beyond my province, as my observations have hitherto been confined to the fresh water species of India.

The species affording the Isinglass is the *Polynemus sele*, Bueh.; *Sele*, or *Sulea*, of the Bengalese, described, but not figured, in the Gangetic Fishes; but if Buehanan's drawings had not been placed under a bushel since 1815, probably this useful discovery would have been sooner made, and better understood by the writer in Parbury's Oriental Herald, to whom we' are indebted for it.

The annexed figure from Buchanan's unpublished collection at the Botanic Garden, conveys an excellent representation, about half size, of a specimen from which I obtained 66 grains of Isinglass: but as the writer in Parbury's Oriental Herald states that from half a pound to three quarters of a pound is obtained from each fish, we may suppose either that *P.scle* attains a much greater size than 24 pounds, the limit given to it by Buchanan, or, that the Isinglass is also afforded by a far larger species, namely *Polynemus teria*, Buch. or *Teria bhangan* of the Bengalese, *Maga jellee* of Russell, which Buchanan was informed sometimes equals three hundred and twenty pounds avoirdupois, and which I frequently have seen of an uniform size, that must have been from fifty to an hundred pounds at least, loading whole cavaleades of hackeries at once on their way to the Calcutta bazar, as I have already stated, during the cold season, when they would consequently seem to be very common.

Although the sound, or natatory vessel is the part of the fish that would afford the principal inducement to form fisheries, one of the obligations that speculators should be obliged to enter into with the Government is, to cure all parts of such fishes as might be taken for their sound. Considering the scarcity of fish in many parts of India, and the great, I may say unlimited demand for it in some parts of the country even when badly preserved, as well as the excellence of the flesh of all the Polynemi, the curing of these fishes might prove no less profitable to the parties themselves, than it would unquestionably be to the country. I was happy to find the attention of the Royal Asiatic Society directed to the subject of curing fishes in India by Dr. Cantor, (vide Proceedings, 21st April, 1838) but a something was then wanting to be known in order to give a direct inducement to the undertaking.* I therefore regard the discovery of the Ichthyocolla of commerce in one of the larger Polynemi of India as a circumstance eminently calculated to direct attention to a promising and almost unlooked for source of enterprise. We first of all require to know whether more Polynemi than one afford it, and to be fully acquainted with the habits and the methods already employed for taking such as do. Polynemus sele, Buch. is the species I examined and found to contain it; but this species is supposed to be a variety only of Polynemus lineatus, which is very common on all the shores to the eastward; it therefore becomes a question of some importance to determine whether P. lineatus yields the same valuable article, and if it

* Should Dr. Cantor still be in London, I would recommend those who may be interested in the important question of Isinglass to consult him, as no one is so competent to afford information regarding the fish by which that article is yielded in India. He will, I am confident, on a re-examination of his notes regarding the Polynemi, readily distinguish those with large sounds, and be able to afford more valuable information regarding their habits, and the quantities in which they are procurable, than could be expected from any one who had not devoted his thoughts to the subject, during a survey of the place in which these fishes occur I am not sure that the species of Polynemus Dr. Cantor particularly refers to in his paper as the Salliah, or Saccolih, is not the very fish that affords Isinglass; if so, it appears to be considered by Dr. Cantor as a new species, and his notes will probably afford all that it is essential to know regarding its habits. Thus, as Sir J. E. Smith somewhere observed, "the naturalist who describes a new species, however trifling it may seem, knows not what benefit that species may yet confer on mankind."

In an interesting account of Kurachce by Licut. Carloss, read at the last anniversary Meeting of the Bombay Geographical Society, cod sounds and shark's fins are mentioned among the exports from that place, and fishing is said to be carried on to a considerable exteut along the coast of Sinde. As however the Cod, Morrhua vulgaris, Cuv., is quite unknown in the Indian Seas, the species from which the sounds alluded to by Lieut. Carloss are taken are no doubt Polynemi, the larger species of which are sometimes called by the English, Rock-Cod. It will be curious to learn if the Chinese have monopolised this trade on the coast of Sinde as well as in the Hoogly.

be really common to the eastward; if so, it seems strange that the Chinese should send for it to the Hoogly. Next, do the Pol. Emoi and Pol. plebeius, supposed by Buehanan to correspond with his Sele, contain the same valuable substance? and do either of Russell's species, namely, the Maga booshee and Maga jellee, (Indian Fishes, 183, 184,) yield it? These are questions easily determined along our coasts by merely opening such fish as correspond with the one here figured, and ascertaining whether they contain an air vessel or not, and whether that vessel if present be large or small. Mergui, Batavia, Singapore, Tranquebar, Madras, and Bombay are points at which observations might be made. This question may be so easily ascertained, that it is hardly worth forming a conjecture about it; but if any of the species common to the coasts of the Eastern seas possessed so valuable a property, the chances are that it would have been long since discovered. It is therefore probable that the large gelatine sound will be found to be peculiar to Pol. sele, and perhaps Pol. teria,* Buch. both of which seem to resort chiefly to the Gangetie estuaries at certain seasons, particularly during the Northcast monsoon, when it is easy to imagine that the shelter afforded in those estuaries at that season, might account for many peculiarities which their ichthyology appears to present, compared with that of open eoasts. It is during the eold season that the two gigantie fishes above mentioned appear to be eaught in most abundance, a circumstance the more favourable to any improved operations that might be resorted to with a view to convert them to useful purposes. Whether both contain the same valuable substance, I am unable to say, having as yet only examined P. sele.

GEN.—POLYNEMUS.

Two fins on the back, with long filaments attached to the sides in front of the pectoral fins. Opercula covered with seales; preoperculum serrated behind. Example. The common Mango-fish of Bengal.

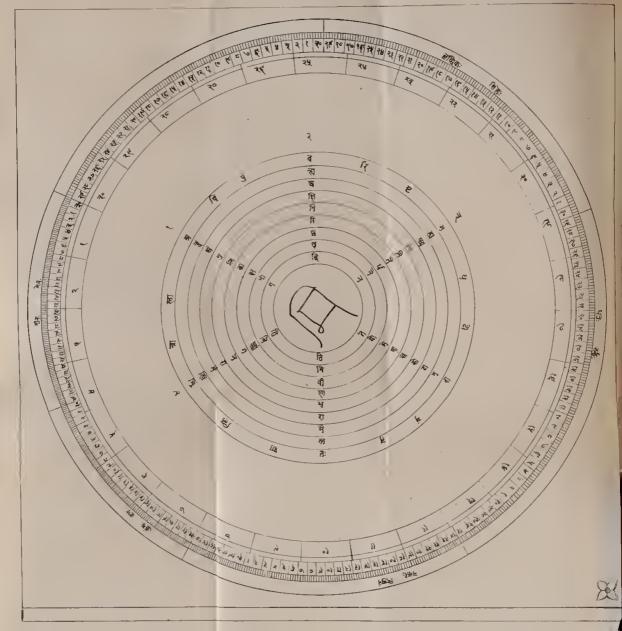
YIELDING ISINGLASS.

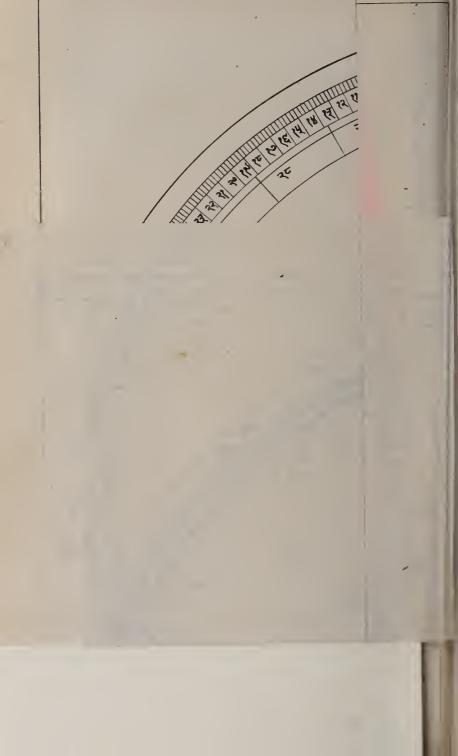
P. Sele, Buch. Plate —

Sele, or Sulea of the Bengalese.

Five filaments, the first reaching from the front of the peetorals to midway between those fins and the anal, the other filaments progressively shorter; no streaks on the sides, lateral line deflected on the lower lobe of the caudal fin. The fin rays are as follows;—first dorsal seven, second dorsal fourteen, pectorals thirteen in each, ventrals each six, anal twelve or thirteen, caudal twenty (?) The teeth are very fine, continuous below round the edes of the jaws, but interrupted at the

^{*} P. quadrifilis, Cuy. P. tetradoctylus, &c. and probably refer to the same.





interior part of the upper jaw, behind which a small detached group of palatine teeth are placed on the vomer.

The liver consists of an elongated left lobe and a short right one, unler which the gall bladder is situated. The stomach is a short musular cul-de-sae, both orifices of which being placed at the anterior extremity, from which numerous small eeeæ are given off, the intestine extends straight to the vent; in all these respects it corresponds nearly with P. paradiseus. The air vessel, which is quite absent in he latter, and on which the peculiar value of this species seems to lepend, is a large spindle-shaped organ about half the length of the ish, thick in the middle and tapering toward the extremities, where it ends in front by two, and behind by a single tendenous cord; similar mall tendenous attachments, about twenty-two in number, connect it on ither side to the upper and lateral parts of the abdominal cavity. This organ, which is called the sound, is to be removed, opened, and stript of a thin vascular membrane which covers it both within and without, vashed perhaps with lime water and exposed to the sun, when it vill soon become dry and hard; it may require some further preparation o deprive it of its fishy smell, after which it may be drawn into shreds or the purpose of rendering it the more easily soluble. The fish which I examined weighed about two pounds and yielded about sixty-five grains of Isinglass, not quite pure, but containing about 10 per cent. of dbumenous matter, owing perhaps to the individual from which it was taken being young and out of season, and not above a tenth part of the ordinary size of the species. But the solution after having been strained appeared to be equal to that of the best Isinglass, which costs in Calcutta from twelve to sixteen rupees a pound. As the subject thus seemed to be of consequence, I gave a portion of the substance in juestion to Dr. O'Shaughnessy for its chemical examination.

- a. Breadth of the back,
- b. Scale magnified,
- c. Scale from lateral line magnified,
- d. Air vessel or sound natural size.

Calcutta, 3rd May, 1839.

ART. V.—Journal of the Mission which visited Bootan, in 1837-38, under Captain R. Bolleau Pemberton. By W. Griffith, Esq. Madras Medical Establishment.*

The Mission left Gowahatti on the 21st December, and proceeded a few miles down the Burrumpootur to Ameengoung, where it halted.

On the following day it proceeded to Hayoo, a distance of thirteen miles. The road, for the most part, passed through extensive grassy plains, diversified here and there with low rather barren hills, and varied in many places by cultivation, especially of *sursoo*. One river was forded, and several villages passed.

Hayoo is a picturesque place, and one of considerable local note; it boasts of a large establishment of priests, with their usual companions, dancing girls, whose qualifications are celebrated throughout Lower Assam. These rather paradoxical ministers are attached to a temple, which is by the Booteas and Kampas considered very sacred, and to which both these tribes, but especially the latter, resort annually in large numbers. This pilgrimage, however, is more connected with trading than religion, for a fair is held at the same time. Coarse woollen cloths and rock salt form the bulk of the loads which each pilgrim carries, no doubt as much for the sake of profit as of penance. The village is a large one, and situated close to some low hills; it has the usual Bengal appearance the houses being surrounded by trees, such as betel palms, peepul, banyan, and caoutchouc. To Nolbharce we found the distance to be nearly seventeen miles. The country throughout the first part of the march was uncultivated, and entirely occupied by the usual coarse grasses; the remainder was one sheet of paddy cultivation, interrupted only by topes of bamboos, in which the villages are entirely concealed; we found these very abundant, but small: betel palms continued very frequent, and each garden or enclosure was surrounded by a small species of screw pine, well adapted for making fences.

Four or five streams were crossed, of which two were not fordable: jheels were very abundant, and well stocked with water fowl and waders. At this place there is a small bungalow for the accommodation of the civil officer during his annual visit; it is situated close to a rather broad but shallow river. There is likewise a bund road.

We proceeded from this place to Dum-Dumma, which is on the Bootan boundary, and is distant ten miles from Nolbharee. We continued through a very open country, but generally less cultivated than

^{*} Presented by the Government

that about Nolbharee; villages continued numerous as far as Dum-Dumma. This is a small straggling place on the banks of a small stream, the Noa Nuddee; we were detained in it for several days, and had the Booteas alone been consulted, we should never have left it to enter Bootan in this direction. The place I found to be very uninteresting.

December 31st. We left for Hazareegoung, an Assamese village within the Bootan boundary.

We passed through a much less cultivated country, the face of which was overrun with coarse grassy vegetation. No attempts appeared to be made to keep the paths clean, and the farther we penetrated within the boundary, the more marked were the effects of bad government. We crossed a small and rapid stream, with a pebbly bed, the first indication of approaching the Hills we had as yet met with. The village is of small extent, and provided with a Nam-ghur in which we were accommodated: it is situated on comparatively- high ground, the plain rising near it, and continuing to do so very gradually until the base of the Hills is reached. There is scarcely any cultivation about the place.

We left on January 2d for Ghoorgoung, a small village eight miles from Hazareegoung'; similar high plains and grassy tracts, almost unvaried by any cultivation, were crossed; a short distance from the village we crossed the Mutanga, a river of some size and great violence during the rains, but in January reduced to a dry bouldery bed. There is no cultivation about Ghoorgoung, which is close to the Hills, between which and the village there is a gentle slope covered with fine sward.

We entered the Hills on the 3d, and marched to Dewangari, a distance of eight miles. On starting we proceeded to the Durunga Nuddee, which makes its exit from the Hills about one mile to the west of Ghoorgoung, and then entered the Hills by ascending its bed, and we continued doing so for some time, until in fact we came to the foot of the steep ascent that led us to Dewangari. The road was a good deal obstructed by boulders, but the torrent contains at this season very little water.

The mountains forming the sides of the ravine are very steep, in many cases precipitous, but not of any great height. generally well wooded, but never to such a degree as occurs on most other portions of the mountainous barriers of Assam. At the height of about 1000 feet we passed a choky, occupied by a few Booteas, and this was the only sign of habitation that occurred.

We were lodged in a temporary hut of large size, some 200 feet below the ridge on which Dewangari is situated; our access to that place being prohibited, as the Booteas, although long before informed of our approach and intentions, were not quite certain of our designs.

On the following day, after some fuss, we were allowed to ascend to the village, in which a pucka house had been appropriated for our accommodation.

Dewangari, the temples of which are visible from the plains of Assam, is situated on a ridge, elevated about 2100 feet above the level of the sea, and 1950 above that of the plains. The village extends some distance along the ridge, as well as a little way down its northern face. The houses, which are in most cases mere huts, amount to about 100; they are distributed in three or four scattered groups; amongst these a few pucka or stone-built houses of the ordinary size and construction occur; the only decent one being that occupied by the Soobah, who is of inferior rank.

Along the ridge three or four temples of the ordinary Boodhistical form occur; they are surrounded with banners bearing inscriptions, fixed longitudinally to bamboos. Attached to some of these temples are monumental walls of poor construction, the faces of which bear slabs of slate, on which sacred sentences are well carved.*

The village abounds in filth. The centre of the ridge is kept as a sort of arena for manly exercises; about this space there occur some picturesque simool trees, and a few fig trees, among which is the banyan.

There is no water course or spring near the village; the supply is brought from a considerable distance by aqueducts formed of the hollowed-out trunks of small trees. In one place this aqueduct is carried across a slip, but otherwise there is nothing tending to shew that difficulties existed, or that much skill would have been exerted had such really occurred.

During our long stay at this place we had many opportunities of forming acquaintance with the Soobah, as well as with the immediately adjoining part of his district. We found this almost uncultivated, and overran with jungle. No large paths were seen to point out that there are many villages near Dewangari; in fact the only two which bear marks of frequent communication, are that by which we ascended, and one which runs eastward to a picturesque village about half a mile distant, and which also leads to the plains.

The Soobah we found to be a gentlemanly unassuming man; he received us in a very friendly manner and with some state; the room

^{*} Both to the east and west of Dewangari there is a picturesque religious edifice, with ornamented windows. Their effect is much heightened by the presence of the weeping Cypress, which situated as it was here, gave me an idea of extreme beauty.

was decently ornamented, and set off in particular by some well executed Chinese religious figures, the chief of which we were told represented the Dhurma Rajah, whose presence even as a carved block was supposed to give infallibility. We were besides regaled with blasts of music. His house was the most picturesque one that I saw, and had some resemblance, particularly at a distance, to the representations of some Swiss cottages. It was comparatively small, but as he was of inferior rank, his house was of inferior size.

The Soobah soon returned our visit, and in all his actions evinced friendship, and gentlemanly feeling; and we soon had reason to find that among his superiors at least we were not likely to meet with his like again. His followers were not numerous, nor, with the exception of one or two who had dresses of scarlet broad-cloth, were they clothed better than ordinarily.

The population of the place must be considerable; it was during our stay much increased by the Kampa people, who were assembling here prior to proceeding to Hazoo. Most of the inhabitants are pure Booteas; many of them were fine specimens of human build, certainly the finest I saw in Bootan: they were, strange to say, in all cases civil and obliging.

Cattle were tolerably abundant, and principally of that species known in Assam by the name of *Mithans*; they were taken tolerable care of, and picketed in the village at night: some, and particularly the bulls, were very fine, and very gentle. Ponies and mules were not uncommon, but not of extraordinary merits. Pigs and fowls were abundant.

The chief communication with the plains is carried on by their Assamese subjects, who are almost entirely Kucharees: they bring up rice and putrid dried fish, and return with bundles of manjistha.

On the 23rd, after taking a farewell of the Soobah, who gave us the Dhurma's blessing, and as usual decorated us with scarfs, we left for Rydang, the halting house between Dewangari and Kegumpa, and distant eight miles from the former place. We reached it late in the evening, as we did not start until after noon. We first descended to the Deo-Nuddee, which is 800 or 900 feet below the village, and which runs at the bottom of the ravine, of which the Dewangari ridge forms the southern side, and we continued ascending its bed, almost entirely throughout the march.

The river is of moderate size, scareely fordable however in the rains; it abounds with the fish known to the Assamese by the name of Bookhar, and which are found throughout the mountain streams of the boundaries of the province. They, like all others, are considered

sacred, although after the first distrust had worn off, the Soobah did not object to my fishing. We passed a Sam Gooroo* engaged in building a wooden bridge; he was the only instance I met with of a Bootea priest making himself useful. He inquired of Capt. Pemberton, with much condescension, of the welfare of the 'Goombhanee' and his lordship the Governor General.

24th. Left for Khegumpa. The march was almost entirely an uninterrupted ascent, at least until we had reached 7000 feet, so that the actual height ascended amounted nearly to 5000 feet. It commenced at first over sparingly wooded grassy hills, until an elevation of about 4000 feet was attained, when the vegetation commenced to change; rhododendrous, and some other plants of the same natural family making their appearance. Having reached the elevation of 7000 feet by steep and rugged paths, we continued along ridges well clothed with trees, literally covered with pendulous mosses and lichens, the whole vegetation being extra tropical. At one time we wound round a huge eminence, the bluff and bare head of which towered several hundred feet above us, by a narrow rocky path or ledge overhanging deep precipices; and thence we proceeded nearly at the same level along beautiful paths, through fine oak woods, until we reached Khegumpa. The distance to which, although only eleven miles, took us the whole day to perform.

This march was a beautiful, as well as an interesting one, owing to the changes that occurred in the vegetation. It was likewise so varied, that although at a most unfavourable season of the year, I gathered no fewer than 130 species in flower or fruit. Rhododendrons of other species than that previously mentioned, oaks, chesnuts, maples, violets, primroses, &c., &c. occurred. We did not pass any villages, nor did we meet with any signs of habitation, excepting a few pilgrims proceeding to Hazoo.

Khegumpa itself is a small village on an exposed site; it does not contain more than twelve houses, and the only large one, which as usual belonged to a Sam Gooroo, appeared to be in a ruinous state. The elevation is nearly 7000 feet. The whole place bore a wintery aspect, the vegetation being entirely northern, and almost all the trees having lost their leaves. The cold was considerable, although the thermometer did not fall below 46°. The scarlet tree rhododendron was common, and the first fir tree occurred in the form of a solitary specimen of *Pinus excelsa*. In the small gardens attached to some of the

^{*} So are they called from their peculiar sanctity. Sam is a priest, and Gooroo also a priest; each priest is therefore twice a priest.

houses I remarked vestiges of the cultivation of tobacco and Probosa.* In the vallies however surrounding this place there seemed to be a good deal of cultivation, of what nature distance prevented me from ascertaining.

25th. Left for Sasce. We commenced by descending gradually until we had passed through a forest of oaks, resembling much our well known English oak; then the descent became steep, and continued so for sometime; we then commenced winding round spurs clothed with humid and sub-tropical vegetation; continuing at the same elevation we subsequently came on dry open ridges, covered with rhododendrons. The descent recommenced on our reaching a small temple, about which the long leaved fir was plentiful, and continued without interruption until we reached a small torrent. Crossing this, we again ascended slightly to descend to the Dimree river, one of considerable size, but fordable. The ascent recommenced immediately, and continued uninterruptedly at first through tropical vegetation, then through open rhododendron and fir woods, until we came close upon Sasce, to which place we descended very slightly. This march occupied us the whole day. After leaving the neighbourhood of Khegumpa we saw no signs of cultivation; the country, except in some places, was arid; coarse grasses, long leaved firs, and rhododendrons forming the predominating vegetation. We halted at Sasce, which is a ruined village, until the 28th. The little cultivation that exists about it is of barley, buckwheat, and hemp.

28th. We commenced our march by descending steeply and uninterruptedly to the bed of the Geeri, a small torrent, along which we found the vegetation to be tropical; ascending thence about 500 feet, we descended again to the torrent, up the bed of which we proceeded for perhaps a mile; the ascent then again commenced, and continued until we reached Bulphai. The path was generally narrow, running over the flank of a mountain whose surface was much decomposed; it was of such a nature that a slip of any sort would in many places have precipitated one several hundred feet. The face of the country was very barren, the trees consisting chiefly of firs and rhododendrons, both generally in a stunted state. We reached Bulphai late in the evening; and the latter part of the march was very uncomfortable owing to the cutting severity of the wind. The vegetation was not interesting until we came on a level with Bulphai, when we came on oaks and some other very northern plants. We were well accommodated in this village, which is a very small one, situated in a somewhat

^{*} Eleusine coracana.

sheltered place, and elevated to 6800 feet above the sea. The surrounding mountains are very barren on their southern faces, while on the northern, or sheltered side, very fine oak woods occur. The houses were of a better order than those at Sasee, and altogether superior to those of Khegumpa. They are covered in with split bamboos, which are secured by rattans, a precaution rendered necessary by the great violence of the winds, which at this season blow from the south or south-east. Bulphai is a bitterly cold place in the winter, and there is scarcely any mode of escaping from its searching winds. The vegetation is altogether northern, the woods consisting principally of a picturesque oak, scarcely ever found under an elevation of 6000 feet. There is one small patch of cultivation, thinly occupied by abortive turnips or radishes, and miserable barley. It was at this place that we first heard the very peculiar crow of true Bootan cocks, most of which are afflicted with enormous corns.

On the 31st we resumed our journey, ascending at first a ridge to the N. E. of Bulphai, until we reached a pagoda, the elevation of which proved to be nearly 8000 feet; and still above this rose to the height of about 10,000 feet a bold rounded summit, covered with brown and low grass. Skirting this at about the same level as the pagoda, we came on open downs, on which small dells, tenanted by well defined oak woods were scattered. After crossing these downs, which were of inconsiderable extent, we commenced to descend, and continued doing so until we came to Roongdoong. About a third of the way down we passed a village containing about twenty houses, with the usual appendage of Sam Gooroo's residence; and still lower we came upon a picturesque temple, over which a beautiful weeping cypress hung its branches. We likewise passed below this a large temple raised on a square terraced basement. From this the descent is very steep, until a small stream is reached, from which we ascended very slightly to the castle of Roongdoong, in the loftiest part of which we took up our quarters. From the time that we descended after crossing the downs, the country had rather an improved aspect, some cultivation being visible here and there. We met a good many Kampas, pilgrims, and one chowry tailed cow, laden with rock salt, which appears to be the most frequent burden.

There was more cultivation about Roongdoong than any other place we had yet seen, although even here it was scanty enough. It would appear that they grow rice in the summer, and barley or wheat during the winter; and this would seem to be the case in all those places of sufficient altitude where the fields were terraced. The elevation of the place is 5175 feet, yet a few orange trees appeared to flourish;

this was the highest elevation at which we saw these trees living. There is a species of Atripleig, the Mooreesa of the Assamese, likewise cultivated about Roongdoong: the seeds are caten as well as the leaves, which form a sort of turkaree. The ingenuity of the Booteas was well shewn here by the novel expedient of placing stones under the ponies' feet to enable them to get at the contents of the mangers! The ponies appeared tolerably well fed, at least I saw them enjoy one good meal, consisting of wild tares and the heads of Indian corn, which had been previously soaked; besides these luxuries, they were supplied with a slab of rock as a rolling stone or scratch-back. Our host, the Dhoompa, who is appointed by the Deb himself, was an impudent drunken fellow, and presumed amazingly on his low rank. He was one of the most disagreeable and saucy persons we met with in Bootan.

Feb. 1st. Our march commenced by descending, gradually at first and then very rapidly, to the Dumree Nuddee; crossing this, which is of small size, at the junction of another torrent, we wound along the face of the mountain forming the right wall of the ravine, ascending very gradually at the same time. We continued thus until we came on the ravine of the Monass, which we followed upwards, the path running about 1000 feet above its bed for about two miles, when we reached Benka. We passed two or three small villages on the right side of the Dumree, and a few others were seen on its left. The country throughout was of a most barren appearance, the vegetation consisting of coarse grasses, stunted shrubs, and an occasional long leaved pine. Benka, or as it is better known Tassgong, is a small place situated on a precipitous spur, 1200 feet below which, on one side, the Monass roars along, and on the other a much smaller torrent. From either side of the village one might leap into eternity: it is elevated 3100 feet above the sea.

We were lodged in a summer house of the Soobah, about half a mile up the torrent, and in which, as it was an open house, and as they kept the best room locked up on the score of its being sacred, we were much incommoded by the furious gusts of wind sweeping as usual up the ravine.

The place itself is the Gibraltar of Bootan, consisting of a large square residence for the Soobah, decorated in the usual manner, of a few poor houses much crowded together, and the defences. These consist of round towers of some height, and a wall which connects the village with the tower; and on the opposite side of the torrent there are other defences of towers and outhouses. All seemed to be in a somewhat ruinous state.

A few days after our arrival we had an interview with the Soobah, on the open spot in front of our residence. On this he had caused to be pitched a small silken pavilion, about half the size of a sipahis' paul. He came in all possible state, with about thirty armed followers, preceded by his state band, which consisted of a shrill clarionet and a guitar, (guiltless of sound) a gong and a bell, ponies, a Tartar dog, gentlemen of the household, priests, all assisted in forming a long string which advanced in single file.

He was polite and obliging, and maintained his rank better than any other of the Soobahs we saw. After the interview, at the end of which presents of decayed plantains, papers of salt, scarfs, and strips of coarse blanket were returned, we were treated with music and dancing women, who only differed from their compeers of India in being elderly, ugly, very dirty, and poorly dressed. The spectators were then seated on the ground and regaled with rice and chong.

On his departure the noise far exceeded that attending on his advent. Shricks and outcries rent the air, the musketoons made fearful report, and, in fact, every one of the followers, of sufficiently low rank, made as much noise as he could. The most curious parts of the ceremony were,—the manner in which they shuffled the Soobah off and on his pony; the mode in which the ponies' tails were tied up; and the petition of the head of the priests for at least one rupee.

It was here that we first heard of the deposition of the old Deb, and the consequent disturbances.

Feb. 5th. Punctually on the day appointed by the Soobah did we leave this place, and descended by a precipitous path to the Monass, which we crossed by a suspension bridge, the best and largest, I suspect, in Bootan. The bed of this river, which is of large size (the banks which are mostly precipitous being sixty or seventy yards asunder) and of great violence is 1300 feet below Benka. We then commenced ascending very gradually, following up the north side of the ravine, until we reached Nulka: the march was a very short one. The country was perhaps still more barren than any we had hitherto seen, searcely any vegetation but coarse grasses occurring. Near Nulka the long leaved pine recommenced. We passed two miserable villages scarcely exceeded by Nulka, in which we took up our abode. No cultivation was to be seen, with the exception of a small field of rice below Nulka.

Feb. 6th. We descended to the Monass, above which Nulka is situated 6 or 700 feet, and continued along its right bank for a considerable time, passing here and there some very romantic spots, and one or two very precipitous places. On reaching a large torrent, the Koollong.

we left the Monass, and ascended the former for a short distance, when we crossed it by a wooden bridge. The remainder of the march consisted of an uninterrupted ascent up a most barren mountain, until we reached Kumna, a small and half-ruined village, 4300 feet above the sea.

Little of interest occurred: we passed a small village consisting of two or three houses and a religions building, and two decent patches of rice cultivation. The vegetation throughout was almost tropical, with the exception of the long leaved fir. which descends frequently as low as 1800 or 2000 feet. I observed two wretched bits of cotton cultivation along the Monass, and some of an edible *Labiata*, one of the numerous makeshifts ordinarily met with among Hill people.

Feb. 7th. Left for Phullung. We ascended at first a few hundred feet, and then continued winding along at a great height above the Koollong torrent, whose course we followed, ascending gradually at the same time, until we reached our halting place. As high as 5000 feet the Kumna mountain retained its very barren appearance; at that elevation stunted oaks and rhododendrons commenced, and at 5300 feet the country was well covered with these trees, and the vegetation became entirely northern.

Throughout the march many detached houses were visible on the opposite bank of the Koollong, and there appeared to be about them a good deal of terrace cultivation. On the left side of the torrent two villages were seen, both as usual in a ruinous state.

8th, and 9th.—We were detained partly by snow, partly by the non-arrival of our baggage. On the 9th I ascended to a wood of Pinus excelsa, the first one I had noticed, and which occurred about 1000 feet above Phullung. The whole country at similar elevations was covered with snow, particularly the downs which we passed after leaving Bulphei. Tassgong was distinctly visible. The woods were otherwise composed of oaks and rhododendrons. At Phullung they were endeavouring to keep alive the wild indigo of Assam; a species of Ruellia, but its appearance shewed that it was unsuited to the climate.

Feb. 10th. To Tassangsee. We continued through a similar country, and at a like elevation, with the exception of a trifling descent to a small nullah, and an inconsiderable one to the Koollong, on the right bank of which, and about 500 feet above its bed, Tassangsee is situated. We crossed this torrent, which even here is of considerable size and not fordable, by means of an ordinary wooden bridge, and then ascended to the village. This is constituted almost entirely by the Soobah's house, which is a large quadrangular building; on the same side, but several hundred feet above the house,

there is a large tower; also a small one on the same level, and some religious edifices. We were lodged over the stable.

The country about Tassangsee is picturesque, with large woods of *Pinus excelsa*, which here has much the habit of a larch, a few villages are visible on the same side of the Koollong, and a little cultivation. The Soobah was absent at Tongsa, to which place he had been summoned owing to the disturbances, so that we were relieved from undergoing the usual importunities and disagrèmens between his followers and ours. The place is said to be famous for its copper manufactures, such for instance as copper eauldrons of large dimensions; but I saw nothing indicating the existence of manufacturers, unless it were a small village below the castle, and on the same side of the Koollong, which looked for all the world like the habitation of charcoal burners. A little further up this stream a few small flour mills occur.

Snow was visible on the heights around, and especially on a lofty ridge to the north. We found Tassangsee to be very cold owing to the violent south or south-east winds; the thermometer however did not fall below 34°. Its elevation is 5270 feet, the vegetation entirely northern, consisting of primroses, violets, willows, oaks, rhododendrons, and pines; very fine specimens of weeping cypress occur near this place.

Feb. 14th. Resumed our journey, interrupted as usual by the non-arrival of our baggage, and scarcity of coolies—and proceeded to Sanah. We descended at first to the torrent, which bounds one side of the spur on which the castle is built, and which here falls into the Koollong; the march subsequently became a gradual and continued ascent, chiefly along its bed. We crossed two small torrents by means of rude flat wooden bridges, and passed two or three described villages. Snow became plentiful as we approached Sanah. This we found to be a ruined village, only containing one habitable house. It is situated on an open sward, surrounded with rich woods of oaks and rhododendrons, yews, bamboos, &c. Its elevation is very nearly 3000 feet.

Feb. 15th. We started at the break of day, as we had been told that the march was a long and difficult one. We proceeded at first over undulating ground, either with swardy spots, or through romantic lanes; we then ascended an open grassy knoll, after passing which we came on rather deep snow. The ascent continued steep and uninterrupted until we reached the summit of a ridge 11,000 feet high. Although we had been told that each ascent was the last, we found that another ridge was still before us, still steeper than the

preceding one, and it was late in the day before we reached its summit, which was found to be nearly 12,500 feet. Above 9500 feet, the height of the summit of the grassy knoll before alluded to, the snow was deep; above 10,000 feet all the trees were covered with hoar-frost, and icicles were by no means uncommon. The appearance of the black pines, which we always met with at great elevations, was rendered very striking by the hoar-frost. Every thing looked desolate, scarce a flower was to be seen, and the oceasional fall of hail and sleet added to the universal gloom.

The descent from the ridge was for the first 1500 feet, or thereabout, most steep, chiefly down zigzag paths, that had been built up the faces of precipices; and the ground was so slippery, the surface snow being frozen into ice, that falls were very frequent, but happily not attended with injury. It then became less steep, the path running along swardy ridges, or through woods. In the evening I came on the coolies, who had halted at a place evidently often used for that purpose, and who positively refused to proceed a single step further. But as Captain Pemberton and Lieut. Blake had proceeded on, I determined on following them, hoping that my departure would stimulate the coolies to further exertions. After passing over about a mile of open swardy ground I found myself benighted on the borders of a wood, into which I plunged in the hopes of meeting my companions; after proceeding for about half an hour slipping, sliding, and falling in all imaginable directions, and obtaining no answers to my repeated halloos; after having been plainly informed that I was a blockhead by a hurkarah, who as long as it was light professed to follow me to the death-" Master go on, and I will follow thee to the last gasp with love and loyalty"-I thought it best to attempt returning, and after considerable difficulty succeeded in reaching the coolies at 81 P. M. when I spread my bedding under a tree, too glad to find one source of

I resumed the march early next morning, and overtook my companions about a mile beyond the furthest point I had reached; and as I expected, found that they had passed the night in great discomfort. We soon found how impossible it would have been for the coolies to have proceeded at night, as the ground was so excessively slippery from the half melted snow, and from its clayey nature, that it was as much as they could do to keep their legs in open day-light.

We continued descending uninterruptedly, and almost entirely through the same wood, until we reached Singé at $9\frac{1}{2}$ A. M. The total distance of the march was fifteen miles—the greatest amount of ascent was about 4500 feet, of descent 6100 feet. We remained at

Singé up to the 18th, at which time some coolies still remained behind, This village, which is 6330 feet above the sea, is of moderate size. containing about twelve houses; in the best of these we were lodged, and it really was a good house, and the best by far we were accommodated with while in Bootan.

On the night of the 17th snow fell all around, though not within 1000 feet of Singé. The comparative mildness of the climate here was otherwise indicated by the abundance of rice cultivation about and below it. It stands on the border of the wooded and grassy tracts so well marked in the interior of Bootan, at least in this direction, and about midway on the left side of a very deep ravine, drained by the river Koosee. On both sides of this, villages were plentiful; on the opposite or western side alone I counted about twenty; about all there is much cultivation of rice and wheat; the surface of the earth where untilled, being covered with grassy vegetation and low shrubs.

Feb. 18th. We commenced a steep descent, and continued it until we came in sight of the river Koosee, which is not visible from Singé. We then turned to the north, following the course of the river upwards, the path running about 800 feet above its bed. Thence, after descending another ravine, drained by a tributary to the Koosee, we again ascended slightly, to re-descend to the Koosee, up the bed of which we then kept until we came to the Khoomar, a considerable torrent, which we crossed about 100 yards from its mouth by a wooden bridge; within a quarter of a mile of this we crossed the Koosee itself by a similar bridge, and then ascended gradually along its right bank until we reached Singlang, which place became visible after passing the Khoomar.

After arriving at the Koosee the country became barren, resembling much that about Tassgong; and the only cultivation we passed in this portion of the march was some rice along the bed of that river.

The usual delays took place at Singlang, and as it was the residence of a Soobah, we suffered the usual inconveniences. We were miserably lodged in a small open summer house, up a small ravine, and at a short distance from the castle, which is a large and rather irregular building.

The village itself is a poor one, most of the inhabitants being quartered in the castle. We had an interview with the Soobah in an open place close to the village: it was conducted with much less state than that at Tassgong. We found the Soobah to be very young, in fact almost a boy; he behaved civilly, and without any pretension. None of his armed men were present, and the whole number of Booteas collected to see the show could not have exceeded 100. We

sat in the open air, while the Soobah was sheltered by a paltry silken eanopy. Nachnees more than ordinarily hideous were in attendance.

There is but little cultivation about this place, which is 4520 feet above the sea, and the surrounding mountains are very barren. About the village I noticed a few stunted sugar canes, some peach and orange trees, the castor-oil plant, and a betel vine or two. The only fine trees near the place were weeping cypresses; the simul also occurs.

Feb. 23rd. After the usual annoyances about coolies and ponies, we left Singlang without regret, for it was a most nuinteresting place. We commenced by an ascent of about 1000 feet, and then continued following the course of the Koosee domnwards. We continued retracing our steps until we reached Tumashoo, to which place we scarcely descended, and on arriving found ourselves opposite Singé, and not more, as the crow flies, than three miles from it. We were told subsequently that there was a direct road from Singé to this, which is about the centre of the populous parts of the country I have mentioned as being visible from Singé; so that it was quite plain that we had been taken so much ont of our way in order to gratify the Soobah by enabling him to return us some decayed plantains, balls of ghee, and dirty salt. The road throughout was good, and evidently well frequented. At an elevation of about 6000 feet we came on open woods of somewhat stunted oaks and rhododendrons; the only well wooded parts we met with being such ravines as afforded exit to water courses. We passed several villages in the latter part of the march, some containing 20 and 30 houses, and met with a good deal of cultivation as we traversed that tract, the improved appearance of which struck us so much from Singé.

Tumashoo is an ordinary sized village, about 5000 feet in elevation. We were lodged in the Dhoompa's house. I observed that the cattle here, which were Mithans, were kept in farm yards, better supplied with straw than the poor beasts themselves. A few sheep were likewise seen.

Left for Oonjar, ascending at first over sward or through Feb. 24th. a fir wood for about 800 feet, when we crossed a ridge, and thence descended until we came to a small torrent which we crossed; thence we ascended gradually, until we surmounted a ridge 7300 feet high; descending thence very gradually until we came over Oonjar, to which place we descended by a steep by-path for a few hundred feet. The road was generally good, winding along at a considerable height above the Koosee, until we finally left it on its turning to the south. Singé was in sight nearly the whole day. The features of the country were precisely the same. At the elevation of 7300 feet the woods became finer, consisting of oaks and rhododendrons, rendered more picturesque from being covered with mosses, and a grey pendulous lichen, a sure indication of considerable elevation. Various temples and monumental walls were passed, and several average sized villages seen in various directions. A fine field of peas in full blossom was noticed at 5500 feet, but otherwise little cultivation occurred. Oonjar is a small village at an elevation of 6370 feet.

Feb. 25th. Leaving this place, we continued winding along nearly at the same altitude until we descended to the river Oonjar, which drains the ravine, on the right flank of which the village is situated. river, which is of moderate size, is crossed twice within 200 yards. From the second bridge one of the greatest ascents we had yet encountered commenced; it was excessively steep at first, but subsequently became more gradual. It only terminated with our arrival at the halting place, which we denominated "St. Gothard," but which is known by the name Peemee. Its elevation is about 9700 feet, and we had ascended from the bridge as much as 4350 feet. commenced at 7500 feet, and became heavy at 8500 feet; Peemce was half buried in it, and ornamented with large icicles: it consists of one miserable but. This but would not have withstood the attacks of another such party as ours, for the men made use of its bamboos for firewood, and the horses and mules cat very large portions of it. Our people were put considerably out from not considering it proper to use snow water, the only fluid to be procured, as there is no spring near.

Feb. 26th. We continued the ascent through heavy snow. For the first 1000 feet it was easy enough, but after that increased much in difficulty. Great part of the path was built up faces of sheer precipices. About noon we passed through the pass of Rodoola, which consists of a gap between two rocks, barely wide enough to admit a loaded pony. One of the rocks bore the usual slab with the mystic sentence "Oom mainee pamee oom." There is nothing striking in the place, which besides is not the highest part of the mountain traversed. The clevation was found to be 12,300 feet.

The remainder of the ascent was very gradual, but continued for about $1\frac{1}{2}$ miles; and I consider the actual pass from which we commenced descending to be at least 12,600 feet. The descent was at first very rapid, passing down the bold face of the mountain, which was covered entirely with stout shrubby rhododendrons. We then descended gradually through a fine wood of the black fir. On recommencing the steep descent we passed over swardy patches surrounded

by fir woods, and we continued through similar tracts until within 1000 feet of our halting place, to which we descended over bare sward.

The march, which was one of thirteen miles, lasted nine hours; the greatest ascent was nearly 4000 feet, the greatest descent nearly 5000 feet. It was with great difficulty that many of our followers succeeded in effecting it: with the usual apathy of natives, they wanted to remain in a ruined log hut, at an elevation of 12,500 feet, without food, instead of pushing on. Capt. Pemberton very properly ejected them all, and when once they had passed the snow, they regained a good deal of their miserable spirit. The road throughout the ascent was buried in snow, the depth of which alone enabled us to cross one very bad place where the constructed road appeared to have given way, and at which most of our ponies had narrow escapes. On the descent the snow became scanty at 9500 feet, and at 9000 feet disappeared almost entirely, lingering only in those places which throughout the day remain obscured in shade.

From the summit of Rodoola a brief gleam of sunshine gave us a bird's-eye view of equally lofty ridges running in every direction, all covered with heavy snow.

The vegetation of the ascent was very varied, the woods consisting of oaks, rhododendrons, and bamboos, up to nearly 11,000 feet. Beyond this the chief tree was the black fir; junipers, alpine polygonums, a species of rhubarb, and many other alpine forms presented themselves in the shape of the withered remains of the previous season of active vegetation. That on the descent was less varied, the trees being nearly limited to three species of pines, of which the black fir scarcely descended below 11,600 feet, when it was succeeded by a more elegant larchlike species, which I believe is *Pinus Smithiana*; this again ceased toward an altitude of 9500 feet, when its place was occupied by *Pinus excelsa*, now a familiar form.

We found Bhoomlungtung to occupy a portion of rather a fine valley. The village is of moderate size, but of immoderate filth, only exceeded in this respect by its tenants, to whom no other Booteas could come near in this, as it would seem, necessary qualification of an inhabitant of a cold, bleak, mountainous country; it is situated on the left bank of a good sized stream. We were lodged in the chief house, but were annoyed beyond measure by the smoke arising from a contiguous cook room, in which operations were going on day and night. The valley is not broad, but is two or three miles in length: it is surrounded on all sides, but especially to the south and east by lofty mountains. The elevation of Bhoomlungtung is nearly 8700 feet,

and we considered it to be the most desirable spot we had yet met with.

The valley is for the most part occupied by wheat fields, but the prospect of a crop appeared to me very faint. Two or three villages occur close to Bhoomlungtung. The tillage was better than any we had seen, the fields being kept clean, and actually treated with manure, albeit not of the best quality; in a few instances they were surrounded with stone walls, as were the court yards of all the houses, but more commonly the inroads of cattle were considered sufficiently prevented by strewing thorny branches here and there. The houses were of ordinary structure, but unspeakably filthy.

With the exception of a sombre looking oak near Bhoomlungtung, and some weeping willows, the arboreous vegetation consists entirely of firs. The shrubby vegetation is northern, and so is the herbaceous, but the season for this had not yet arrived. It was here that I first met with the plant called after Mr. James Prinsep; the compliment is not, in Bootan at least, enhanced by any utility possessed by the shrub, which is otherwise a thorny, dangerous looking species. Here too we first saw English looking magpies, larks, and redlegged crows.

March 1st. Proceeded to Byagur or Juggur. We were told that the march was a short one, and that we should continue throughout down the bcd of the Tung-Tchien, the river of Bhoomlungtung; we found, however, that we soon had to leave this, and commence ascending. After a second descent to a small nullah, we encountered a most tedious ascent, which continued until we surmounted a ridge overlooking Byagur, to which place we descended very rapidly. The height of this ridge was 9950 feet, yet we did not meet with a vestige of snow. The distance was fourteen miles. We passed two or three small villages, but saw scarcely any vegetation after leaving the valley. The vegetation continued the same, the road traversing either sward or fir woods, consisting entirely of *Pinus excelsa*.

The valley in which Byagur is situated is still larger than that of Bhoomlungtung: it is drained by a large river which is crossed by a somewhat dilapidated wooden bridge; the elevation is about 8150 feet. The village so called is a moderately sized one; but there are several others in the valley, which is one of the very few decently inhabited places we met with. The inhabitants are much cleaner than those of Bhoomlungtung. The Soobah was absent at Tongsa; his castle, which is a very large, irregular, straggling building, is situated on a hill 500 feet above the plain, some of its defences, or outworks, reaching nearly to the level of the valley. During the hot weather

it is occupied by Tongsa Pillo, on which occasion the Soobah retires to Bhoomlungtung.

The cultivation is similar to that of the other valley, but the crops looked very unpromising. The soil is by no means rich, and the wind excessively bleak; wheat or barley are the only grains cultivated. The mountains which hem in this valley are not very lofty; to the north, in the back ground, perpetual snow was visible. To our west was the ridge which we were told we should have to cross, and which in its higher parts could not be less than 12,000 feet.

March 4th. We commenced ascending the above ridge almost immediately on starting; surmounting this, which is of an elevation at the part we crossed of 11,035 feet, we continued for sometime at the same level, through fine open woods of Pinus Smithiana: having descended rapidly afterwards to a small nullah, 9642 feet in elevation, we then reascended slightly to descend into the Jaisa valley. On the east side of the ridge, i. c. that which overlooks Byagur, we soon came on snow, but none was seen on its western face, notwithstanding the great elevation. The country was very beautiful, particularly in the higher elevations. I may here advert to the bad taste exhibited in naming such objects after persons, with whom they have no association whatever. As it is not possible for all travellers to be consecrated by genera, although this practice is daily becoming more common, we should connect their names with such trees as are familiar to every European. As we have a Pinus Gerardiana and Webbiana, so we ought to have had Pinus Herbertiana and Moorcroftiana, &c. By so doing, on meeting with fir trees among the snow-clad Himalayas, we should not only have beautiful objects before us, but beautiful and exciting associations of able and enduring travellers. Of Capt. Herbert, the most accomplished historian of these magnificent mountains, there is nothing living to give him a "local habitation and a name." It will be a duty to me to remedy this neglect; and if I have not a sufficiently fine fir tree hitherto undescribed in the Bootan collection, I shall change the name of the very finest hitherto found, and dignify it by the name Herbertiana. The prevailing tree was the Smithian pine. We saw scareely any villages, and but very little cultivation. Jaisa is a good sized village; it was comparatively clean, and the houses were, I think, better than most we had hitherto seen. We were lodged in a sort of castle, consisting of a large building, with a spacious flagged court yard, surrounded by rows of offices. The part we occupied fronted the entrance, and its superior pretensions were attested by its having an upper story.

There is a good deal of wheat cultivation around the village, which is not the only occupant of the valley: this is the highest we had yet seen, and is perhaps one of the highest inhabited vallies known, as it is 9410 feet above the sea; it is drained by a small stream, and is of less extent than either that of Byagur or Bhoomlungtung. The surrounding hills are covered with open fir woods, and are of no considerable height. Larks, magpies, and red-legged crows, continued plentiful, but on leaving this valley we lost them.

March 5th. We proceeded up the valley, keeping along the banks of the stream for sometime; we then commenced ascending a ridge, the top of which we reached about noon: its clevation was 10.930 feet. The descent from this was for about 2500 feet very steep and uninterrupted. until we reached a small torrent at an elevation of 8473 feet: from this we ascended slightly through thick woods of oak, &c. until we came on open grassy tracts, through which we now gradually descended at a great height above the stream, which we had left a short time before. We continued descending rather more rapidly until we came to a point almost immediately above Tongsa, by about 1000 feet; from this the descent was excessively steep. The distance was 13 miles. On the ascent snow was common from a height of 9000 feet upwards. The vegetation on this, or the eastern side, was in some places similar to that above Byagur. Beautiful fir woods formed the chief vegetation, until we came close to the summit, when it changed completely. Rhododendrons, Bogh puttah, and a species of birch, and bamboos, were common, mixed with a few black pines. The woods through which we descended, were in the higher elevations almost entirely of rhododendrons; and lower down chiefly of various species of oak and maple—the former being dry and very open, the latter humid and choked up with underwood. After coming on the open grassy country we did not revert to well wooded tracts.

No villages occurred, nor did we see any signs of cultivation after leaving the valley of Jaisa until we came near Tongsa, above which barley fields were not uncommon. Tongsa, although the second, or at any rate the third place in Bootan, is as miserable a place as any body would wish to see. It is wretchedly situated in a very narrow ravine, drained by a petty stream, on the tongue of land formed by its entrance into the large torrent Mateesum, which flows 1200 feet below where the castle stands. The village is 6250 feet in altitude: it consists of a few miserable houses, one of the worst of which was considerately lent to us. The castle is a large and rather imposing building, sufficiently straggling to be relieved from heaviness of appearance: it is so overlooked, and indeed almost overhung by some

of the nearest mountains, that it might be knocked down by rolling rocks upon it. It is defended by an outwork about 400 feet above.

The surrounding country is uninteresting, the vegetation consisting of a few low shrubs and some grasses: of the former the most common are a species of barberry, and a hitherto undescribed genus of Hamamelidæ. No woods can be reached without ascending 12 or 1500 feet.

Barley was the chief cultivation we saw, but the crops alternated with rice, which is here cultivated, as high as 6800 feet. In the gardens attached to the cottages, or rather huts, we observed the almond and pear in full blossom: the only other trees were two or three weeping cypresses and willows, and a solitary poplar.

Our reception was by no means agreeable. I was roared to most insolently to dismount while descending to the castle; our followers were constantly annoyed by the great man's retainers; and, in fact, we got no peace until we had an interview with the Pillo on the 15th. Before the arrival of this personage, who had just succeeded to office, great efforts were made to bring about an interview with the ex-Pillo, and a stoppage of supplies was actually threatened in case of refusal. The firmness of Capt. Pemberton was however proof against all this.

It had been previously arranged that the former Pillo, the uncle of the present one, should be admitted at this interview on terms of equality; this kindness on the part of the nephew being prompted probably by the hopes of securing his uncle's presents afterwards. We were received with a good deal of state, but the apartment in which the meeting took place was by no means imposing, or even well ornamented. The attendants were very numerous, and mostly well-dressed, but the effect of this was lessened by the admission of an indiscriminate mob. We were not admitted however into the presence without undergoing the ordeals which many orientals impose on those who wish for access to them.

We were most struck with the difference in appearance between the old and new Pillos: the former was certainly the most aristocratic personage we saw in Bootan; the latter, a mean looking, bull-necked individual. A novel part of the ceremony consisted in the stirring up of a large can of tea, and the general recital of prayers over it, after which a ladleful was handed to the Pillos, who dipped their fore-finger in it, and so tasted it.

The meeting passed off well; and afterwards several less ceremonious and more friendly meetings took place. We took leave on the 22nd. This interview was chiefly occupied in considering the list of presents, which the Pillo requested the British Government would do themselves the favour of sending him. He begged most unconscionably, and I thought that the list would never come to an end; and he was obliging enough to say, that any thing he might think of subsequently would be announced in writing. He was very facetious, and evidently rejoiced at the idea of securing so many good things at such trifling expense as he had incurred in merely asking for them. Nothing could well exceed the discomfort we had to undergo during our tedious stay at this place. Our difficulties were increased subsequently to our arrival by the occurrence of unsettled weather, during which we had ample proofs that Bootan houses are not always water-proof; we were besides incessantly annoyed with a profusion of rats, bugs, and fleas; nor was there a single thing to counterbalance all these inconveniences, and we consequently left the place without the shadow of a feeling of regret.

On the 23rd of March we resumed our journey; and having traversed the court yard of the castle, we struck down at once to the river Mateesum by a very steep path. Having crossed this by a bridge, we gradually ascended, winding round the various ridges on the right flank of the ravine of this river. We left it when it turned to the southward, in which direction Bagoa-Dooar was visible, and continued ascending gradually until we reached Tasceling, seven miles from Tongsa, and 7230 feet above the sea.

Taseeling consists of a large house, principally used as a halting-place for *chiefs* going to and from Punukka and Tongsa. The surrounding mountains are rather bare, as indeed is the country between it and Tongsa. There is some cultivation to be seen around it, and several villages. As we approached Taseeling open oak and rhododendron woods recurred. The vegetation near the Mateesum was subtropical; the road was good, and in one place was built in zigzag up the face of a cliff.

March 24th. To Tehinjipjee. We commenced by ascending until we had surmounted a ridge about 800 feet above Tasceling; during the remainder of the march we traversed undulating ground at nearly the same altitude, at first through an open country, afterward through beautiful oak and magnolia woods, until we came on the torrent above which we had been ascending since leaving the Mateesum; a little farther on we came on the finest temple we had seen, and situated in a most romantic spot. It stood on a fine patch of sward, in a gorge of the ravine, the sides of which were covered with beautiful cedar-looking pines; the back ground was formed by lofty mountains covered with heavy snow.

Following the river upwards for about a mile and a half, we reached Tchinjipjee, which is situated on the right bank of the torrent.

The march was throughout beautiful, particularly through the forest, which abounded in pieturesque glades. No villages or cultivation were seen.

Tchinjipjee is perhaps the prettiest place we saw in Bootan; our halting place stood on fine sward, well ornamented with (Quercus seme carpifolia?) very picturesque oaks, and two fine specimens of weeping cypress. The surrounding hills are low, either almost entirely bare or elothed with pines. The village is of ordinary size, and is the only one visible in any direction; its elevation is 786 feet. There is some cultivation about it, chiefly of barley, mixed with radishes.

March 27th. We continued following the river upwards, the path running generally at a small height above its bed. Having crossed it by a rude wooden bridge, we diverged up a tributary stream, until we reached a small village; we thence continued ascending over easy grassy slopes, here and there prettily wooded, until we reached the base of the chief ascent, which is not steep, but long, the path running along the margin of a rhododendron and juniper wood: the height of its summit is 10,873 feet. Thence to Rydang was an uninterrupted and steep descent, the path traversing very beautiful woods of rhododendrons, oaks, yews, &c. Snow was still seen lingering in sheltered places above 10,000 feet. The march throughout was beautiful. In the higher elevations the Bogh Pat was very common.

Besides the village mentioned, two temporary ones were seen near the base of the great ascent, built for the accommodation of the Yaks and their herdsmen: of this eurious animal two herds were seen at some distance.

Rydang is prettily situated towards the bottom of a steep ravine: its elevation is 6963 feet. A few villages occur about it, with some barley and wheat cultivation.

March 28th. We descended directly to the river Gnee, which drains the ravine, and continued down it sometime, crossing it once; then diverging up a small nullah we commenced an ascent, which did not cease until we had reached an elevation of 8374 feet. Continuing for sometime at this elevation we traversed picturesque oak and rhodoendron woods, with occasionally swardy spots; subsequently descending for a long time until we reached Santagong.

Oak and rhododendron woods continued common until we approached Santagong, in the direction of which the trees became stunted, and the country presented a barren aspect. Several villages were however seen in various directions, surrounded with cultivation.

Santagong is 6300 feet above the sea; it is a small village, but the houses are better than ordinary. The surrounding country, especially to the north, is well cultivated, and the villages numerous. The country is bare of trees; almost the only ones to be seen are some long leaved firs, a short distance below Santagong, close to a small jheel abounding in water fowl.

March 29th. From Santagong we proceeded to Phain, descending immediately to the stream, which runs nearly 1800 feet below our halting place. Crossing this, as well as a small tributary, we encountered a steep ascent of 1000 feet. Subsequently we wound along, gradually ascending at the same time, until we reached an inconsiderable ridge above Phain, to which place we descended slightly. The distance was six miles. The country was bare in the extreme, and after crossing the stream above mentioned, villages became rather scanty. Towards Phain the soil became of a deep red colour.

This place, which is 5280 feet above the sea, is a small village, containing six or seven tolerable houses. The country is most uninteresting and uninviting, scarce a tree is to be seen, the little vegetation that does exist consisting of low shrubs. A few villages are scattered about it, and there is some rice cultivation.

We were detained here until the 1st of April, in order that we might repose after our fatigues; but in reality to enable the Punukka people to get ready our accommodations. Wandipore, a well known eastle situated in the Chillong pass, is just visible from Phain, below which it appears to be some 1200 feet, and about three miles to the south west. Its Zoompoor, one of the leading men in Bootan, made some ineffectual attempts to take us to Punukka viâ his own eastle; various were the artifices he resorted to for this purpose, but he failed in all. Among others, he sent a messenger to inform us that the Deb and Dhurma were both there, and very anxious to meet us, and that after the meeting they would conduct us to Punukka.

April 1st. To Punukka. We descended rather gradually towards the Patchien, proceeding at first north-west, and then to the north. On reaching the stream, which is of considerable size, we followed it up, chiefly along its banks, until we arrived at the capital, no view of which is obtained until it is approached very closely. The valley of the Patchien was throughout the march very narrow; there was a good deal of miserable wheat cultivation in it, and some villages, all of moderate size. The country continued extremely bare. The distance was about eleven miles. Punukka, the second capital in Bootan, the summer residence of a long line of unconquered monarchs—Punukka to which place we had been so long looking forward with feelings of de-

light, although the experience of Tongsa ought to have taught us better, disappointed all of us dreadfully. For in the first place I saw a miserable village, promising little comfort as respects accommodation, and one glance at the surrounding country satisfied me that little was to be done in any branch of natural history. For a narrow, unfruitful valley, hemmed in by barren hills, on which no arboreous vegetation was to be seen, except at considerable elevation, gave no great promise of botanical success.

On reaching the quarters which had been provided for us, and which were situated in front of the palace, we were much struck with the want of care and consideration that had been shewn, particularly after the very long notice the Booteas had received of our coming, and the pressing invitations sent to meet us.

These quarters had evidently been stables, and consisted of a square enclosure surrounded by low mud walls. Above the stalls small recesses, scarcely bigger than the boxes which are so erroneously called a man's "long home," had been made for our special lodgements; that of the huzoor, Captain Pemberton, was somewhat larger, but still very much confined. Having added to these a roof formed of single mats, an oppressive sun, and a profusion of every description of vermin, Capt. Pemberton determined on renting quarters in the village, and this, owing to his liberality, was soon accomplished; and from the two houses we occupied did we alone obtain comfort among the numerous annoyances we were doomed to experience during our lengthened stay.

The capital of Bootan is for pre-eminence, miserable. The city itself consists of some twelve or fifteen houses, half of which are on the left bank of the river, and two-thirds of which are completely ruinous, and the best of these 'Capital' houses were far worse than those at Phain or Santagong. &c. Around the city, and within a distance of a quarter of a mile, three or four other villages occur, all bearing the stamp of poverty, and the marks of oppression.

The palace is situated on a flat tongue of land formed by the confluence of the Matchien and Patchien rivers. To the west it is quite close to the west boundary of the valley, the rivers alone intervening. It is a very large building, but too uniform and too heavy to be imposing: it is upwards of 200 yards in length, by perhaps 80 in breadth. Its regal nature is attested by the central tower, and the several coppered roofs of this.

The only cheering objects visible in this capital, are the glorious Himalayas to the north, and a Gylong village 12 or 1500 feet above the palace to the west; elsewhere all is dreary, desolate looking, and hot.

During the first few days of our stay, and indeed until our interview with the Deb, we were much annoyed by the intruding impertinence and blind obstinacy of his followers. They were continually causing disputes either with the sentries or our immediate followers, and it was only by repeated messages to the palace, stating the probable consequence of such a system of annoyance, that Captain Pemberton succeeded in obtaining any respite.

After many delays, we were admitted to the Deb's presence on the 9th. Leaving our ponies, we crossed the bridge built over the Patchien, which was lined with guards, and defended by some large, wretchedly constructed wall pieces. We then entered a paved yard, and thence ascended by some most inconvenient stairs to the palace, the entrance to which was guarded by a few household troops dressed in scarlet broad cloth. We then crossed the north quadrangle of the palace, which is surrounded with galleries and apartments, and was crowded with eager spectators, and ascending some still more inconvenient, or even dangerous stairs, reached a gallery, along which we proceeded to the Deb's receiving room, which is on the west face of the palace: at the door of this the usual delays took place, these people supposing that their importance is enhanced by the length of delay they can manage to make visitors submit to.

The Deb, who was an ordinary looking man, in good condition, received us graciously, and actually got up and received his Lordship's letter standing; the usual conversation then took place by means of interpreters, and the Deb having received his presents, and presented us with usual plantains, gliee, and some walnuts, dismissed us; and this was the first and last time I had the honour of seeing him, as I was indisposed at the time of our leaving. To return, the room was a good sized one, but rather low; it was supported by well ornamented pillars, hastily hung with scarfs and embroidered silk. The most amusing part of the ceremony was that exhibited by the accountant general's department, who were employed in counting and arranging courie shells-really emblematic of the riches of the kingdom-apparently with no other aim than to re-count, and re-arrange them, yet they were very busily engaged in writing the accounts. A day or two He received us in after, our interview with the Dhurma took place. an upper room of the quadrangular central tower: while we were in his presence we remained standing, in compliment to his religious character. The Dhurma Rajah is a boy of eight or ten years old, and good looking, particularly when the looks of his father, the Tungso Pillo, are taken into consideration. He sat in a small recess, lighted chiefly with lamps, and was prompted by a very venerable looking,

grey-headed priest. He had fewer attendants, and his room was less richly ornamented than that of the Deb. Around the room sat priests busily employed in muttering charmed sentences from handsome gilt lettered black books, which reminded me of those used in some parts of Burmali.

Very few of our attendants saw either of the Rajahs, and it was expected that no one would presume to enter the Dhurma's presence empty handed. To some of the sipahis, who were anxious to see him, his confidential advisers said, "Give forty rupees, come into the quadrangle under the Dhurma's window, and then you may see him, or you may not see him; I will not be answerable for any thing, but receiving the forty rupees."

During our protracted stay at this place, nothing particularly worthy of notice occurred. Intrigues seemed to be constantly going on, and the trial of temper on the part of Captain Pemberton must have been very great; it was however soon evident that no business could be transacted with a Bootea Government without being enabled first to enforce abundance of fear, and consequently any amount of agreement from them; messages to and fro passed continually, the bearer being a very great rascal, in the shape of the Deb's Bengal Moharrer. Thus he would come and appoint the next day for a meeting; then he would return and say, that such a place was better than such a place; as evening drew near he would come and say, unless you agree to such and such, there will be no meeting; and after bearing a message that no change in this respect would be made, he would make his appearance and say, all the minsters were sick, and so could not meet.

My only amusement out of doors was a morning walk up or down the valley. I was prompted to this chiefly by the pangs of hunger, as the Bootea supplies were very short, indeed wild pigeons afforded. me at least some relief. During the day I examined such objects as my collectors brought in, for it was too hot to think of being out after 9 a. m. I also had a few Bootea patients, most of whom were labouring under aggravated forms of venereal.

The climate of Punukka has but little to recommend it, and in fact nothing, if viewed in comparison with the other places we had seen in Bootan. The greatest annoyance existed in the powerful winds blowing constantly throughout the day up the valley, and which were often loaded with clouds of dust. The mean temperature of April may be considered as 71°.

The maximum heat observed was 83°, the minimum 64°. The mean temperature of the first week of May was 75° 3′; the maximum

80°, and the minimum 70°. The cultivation in the valley, the soil of which seems very poor, containing a large proportion of mica, was during our stay limited to wheat and buck-wheat, but scarcely any of the former seemed likely to come to ear. Ground was preparing for the reception of rice, which is sown and planted in the usual manner. Crops just sown are immediately eaten up by the swarms of sacred pigeons that reside in the palace, so that husbandry is by no means profitable; more especially as there are other means of providing for the crops, such as they may be. Thus we saw several small fields, amounting perhaps to an acre in extent, cut down to provide fodder for some ponies that had lately shared in a religious excursion to Wandipore.

Cattle are not frequent. There were some pigs. The fowls were of the most miserable description, and very scarce. In spite of offers of purchase and plenty of promises, we were throughout allowed three a day, and they were rather smaller than pigeons. Towards the latter end of our stay, rice became bad and scarce.

We saw nothing indicating any degree of trade worth mentioning. Parties changing their residence frequently passed through from the north-east, generally accompanied by ponies, whose most common burdens appeared to be salt. No direct intercourse appears to exist with Thibet, as even the tea, which they consume in large quantities, is said to come from Paro Pillo's.

There are a great number of Assamese slaves about Punukka; indeed all the agricultural work, as well as that of beasts of burden, appears to devolve upon these unfortunate creatures, who are miserably provided for, and perhaps dirtier than a genuine Bootea himself. During my morning walks I was almost daily entreated for protection. In one case only, and in this by the merest accident, was Captain Pemberton enabled to get such evidence as authorised him to claim it as entitled to British protection. Connected with this case is an act of black treachery, to which I shall hereafter refer.

We stopt so long here, and we had daily so many instances proving that no confidence could be placed on any thing coming from the palace, that I began at last to despair of getting away. The old Deb was very anxious to see us, and the new Deb still more anxious that we should accompany him when he left Punukka, in the hope that the presence of the Mission would be advantageous to him.

It was entirely owing to the firmness of Captain Pemberton that we were enabled to avoid such a disagreeable meeting; and the Deb, feeling at last convinced that his views could not be earried into effect, gave orders for getting rid of us as speedily as possible; and on

the 9th May at noon we left Punukka, the most uninviting place I have ever seen in a hilly country. On the morning of the same day there was a demonstration in the palace of great boldness; the roof of the northern side was covered with troops, who shouted, fired, and waved banners.

We crossed both bridges of the palace without any interruption or annoyance, at which I was most agreeably surprised; and then gradually ascended the right flank of the valley, following the course of the united rivers, Patchien and Matchien. We proceeded in this direction for sometime, until we came on a ravine affording an outlet to a tributary of the Panukka river, which we then followed, gradually descending through fir woods until we reached the torrent. Crossing this, which is a small one, we commenced the ascent to Telajong, which we soon reached. We were lodged in the eastle, which is in the hands of the old Deb's followers, and who threatened to fight very hard. Its elevation is about 5600 feet, and it is situated towards the base of very steep mountains, which we crossed next day. It is somewhat ruinous, but might even in Bootea hands make a stout defence against a Bootea force.

The march was a moderate one; up to the ravine the country had the same barren aspect, but on changing our direction we came on fir woods. About Telagong the country is well wooded, chiefly with oaks, and the vegetation is considerably varied. Near the torrent we met with a village or two, and a little cultivation, chiefly of buck wheat.

April 10th. We descended to a small nullah just below the castle, and then commenced an ascent which lasted for three or four hours, and which was generally moderately steep. On surmounting the ridge, which was of an elevation of about 10,000 feet, we commenced a long, and uninterrupted descent along the course of a small torrent (the path being well diversified with wood and glade) until we reached Woollokha, distant fourteen and half miles from Telagong.

About 1200 feet above this we came on rather fine wheat cultivation, among which two or three villages were situated. Above this elevation we came on fine woods of oaks and yews, diversified with swardy spots; and on reaching the summit of the ridge an open sward with beautiful rhododendron, birch, and juniper woods. Herbaceous monocotyledons abounded here, in fact the vegetation altogether was very rich, and the first spring vegetation we had yet met with. Gooseberries and Currants were common from 9000 feet upwards: Euphorbius, Primroses, Saxifragis, Clematises, Anemones, Ranunculuses, &c., were some among the many European forms that I met

with on this march. Near the summit, on the descent, a genuine larch was observed, and lower down two species of poplar were very common. The scenery was generally very beautiful. We passed a delightfully situated Gylong village not much below the summit, and near Woollookha saw Symtoka, a rather large square building belonging to the Deb Rajah, situated two or three hundred feet above our road.

Woollookha is a good sized village, and the houses are very good: it is close to the river Teemboo, which drains Tassisudon valley, a few miles distant to the north. There are several villages around it, and a good deal of cultivation of alternating crops of barley, wheat, and rice. The valley, if indeed it can be called so, for it is very narrow, is picturesque chough, although the surrounding hills are not well wooded. The banks of the river, which here flows gently enough, are well ornamented with weeping willows.

11th. We continued our route following the river, the path generally laying down its bed, or close to it, oecasionally ascending two or three hundred feet above it. Halted at Lomnoo, an easy march. The features of the country remained the same until we neared our halting place, when woods of *Pinus excelsa* became very eommon; roses occurred in profusion, and the vegetation generally consisted of shrubs; villages were tolerably frequent, and the euckoo* was again heard.

12th. To Chupcha. Continued for some time through a precisely similar country, still following the river, but generally at some height above its bed. After passing Panga, a small village at which our conductors wished us to halt, although it was only six miles from Sommoo, we descended gradually to the river Tecmboo, and continued along it for some time, during which we passed the remains of a suspension bridge. Leaving the rivers soon afterwards, we encountered such a long ascent that we did not reach Chupcha till rather late in the evening, most of the eoolies remaining behind. Having surmounted the ridge immediately above Chupcha, and which is about 8600 feet in altitude, we descended very rapidly to the village, which is about 600 feet lower down the face of the mountain. The road was for the most part tolerably good; in one place it was built up along the face of a cliff overhanging the Teemboo. The scenery was throughout pretty, but especially before coming on the ascent: some of the views along the river were very picturesque.

The first time I heard this bird was about Punukka. Although in plumage it differs a good deal from the bird so well known in Europe, yet its voice is precisely mular.

After leaving Panga no villages were passed, and one small one only was seen on the opposite bank of the Teemboo; but up to the above mentioned place the country continued tolerably populous. The vegetation, until the ascent was commenced, was a good deal like that about Somnoo, Pinus excelsa forming the predominant feature. From the base of the ascent it became completely changed—oaks forming the woods, and from 7500 feet upwards, various rhododendrons occurring in profusion, mixed with wild currants, &c. We were detained at Chupcha for two days, at the end of which the last coolies had scarcely arrived: it is ten miles from Somnoo, and sixteen miles from Panga, and about 8100 feet in elevation. The greatest ascent, and this too after a march of twelve miles, must have been between 2500 and 3000 feet. We were lodged comfortably in the castle, although it was not white-washed, nor had it the insignia of a belt of red ochre. It is a short distance from the village, which again is two or three hundred yards to the west of the direct road. We thought Chupcha a delightful place: the seenery is varied, the temperature delightful, varying in doors from 46° to 52°

The face of the mountain although very steep, is about the castle well cultivated: the crops which were of six ranked barley, were very luxuriant, and certainly the finest we ever saw in the country. The red-legged erow recurred here. During our stay, I ascended the ridge immediately above the eastle, passing through a very large village of Gylongs, elevated at least 9000 feet. This village was the largest I saw in Bootan, and was ornamented with a pretty religious building, surrounded by junipers, and more decorated than such edifices usually are. Up to the village the path passed through beautiful woods of Pinus excelsa: above it I came on open sward, which continued on the south face up to the very summit of the ridge, which was nearly 11,000 feet. The north face of the mountain was well wooded: on it rhododendrons, a few black pines, beautiful clumps of Pinus Smithiana, Bogh Pat, Mountain Pears, Aconites, Columbines, Saxifrages, Primroses, &c. were found in abundance. The southern face was decorated with a pretty yellow Anemone, and the pink spikes of a Bistort. From the ridge still loftier ones were visible in every direction, all of which were covered with snow, which lightly sprinkled the one on which I stood. At this season snow searcely remains for a day under 11,000 feet, except in very sheltered situations.

15th. I left Chupeha with much regret. We descended by a precipitous path to a torrent about 1800 feet below the castle. Crossing this, we descended gradually until we came on the ravine of the

Teemboo; at which point there is a small pagoda, visible from Chupcha. We then turned southwards, and continued for a long time at nearly the same level, passing a small village, Punugga, three or four hundred feet below us, and in which Capt. Turner had halted on his ascent. The descent to Chuka was long and gradual, becoming tolerably steep as we approached it. We reached the Teemboo by a miserable road, about half a mile from Chuka castle, which occupies a small eminence in what has once been the bed of the river.

The march was seventeen miles. The road in many places was very bad, and scarcely passable for loaded ponies. The scenery was frequently delightful, and vegetation was in the height of spring luxuriance. The hills bounding the ravine of Teemboo continued very high until we reached Chuka; they were well diversified, particularly at some height above us, with sward and glade, and richly ornamented with fine oaks, rhododendrons, cedar-like pines, and *Pinus excelsa*. Water was most abundant throughout the march, and in such places the vegetation was indescribably rich and luxuriant.

No village besides that of Punugga was passed or seen, nor did I observe any cultivation. I was much impeded by droves of cattle passing into the interior, for the road was frequently so narrow, and the mountains on which it was formed so steep, that I was obliged to wait quietly until all had passed. These cattle were of a different breed from those hitherto seen in Bootan, approaching in appearance the common cattle of the plains, than which however they were much finer and larger.

We were sufficiently well accommodated in the castle of Chinka, which is as bare of ornament as its neighbour of Chupcha; it is a place of some strength against forces unprovided with artillery, and commands the pass into the interior very completely. There is a miserable village near it, and several trees of the *Ficus clastica*.

16th. To Murichom. We descended to the Teemboo, which runs some fifty feet below the castle, and crossed it by a suspension bridge, of which a figure has been given by Capt. Turner; it is very inferior in size and construction to that of Rassgong, although, unlike that, it is flat at the bottom. We continued following the Teemboo winding gradually up its right bank, chiefly through rather heavy jungle, and descending subsequently about 600 feet to its bed by a dreadfully dangerous path, built up the face of a huge cliff. We continued along it until we crossed a small torrent at its junction with the large river, and then ascended gradually, following the ravine of this through humid jungle. As we approached Murichom we left the Teemboo a little to our left, and continued through a heavily

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wooded country. Before ascending finally to Murichom, we descended twice to cross torrents. We reached Murichom late in the evening, the distance being eighteen miles.

No villages were seen until we came in sight of Murichom. The mountains were much decreased in height, and clothed with dense black jungle. We passed two water-falls, both on the left bank of the Teemboo, the one most to the south being the Minza peeya of Turner. Neither of them appeared particularly worthy of notice. The vegetation had almost completely changed, it partook largely of the subtropical characters, scarcely a single European form being met with. The road was absolutely villainous,* it was very narrow, frequently reduced to a mere ledge, and painful owing to the sharp projections of the limestone, the prevailing rock of this part of the country. Murichom is a small village, rather more than 4000 feet above the sea; the houses, which are about eight or ten in number, are thatched: it is prettily situated: there is a little cultivation of wheat and maize about it. Although at so considerable an elevation, most of the plants were similar to those of Assam.

17th. Leaving Murichom we descended rapidly to a small torrent, from which we re-ascended until we had regained the level of Murichom. The path then wound along through heavily wooded country at an elevation of 4000 or 4200 feet: we continued thus throughout the day. At 5 p. m. finding that the coolies were commencing to stop behind, and failing in getting any information of my companions, I returned about $1\frac{1}{2}$ mile to the small village of Gygoogoo, which is about 300 feet below the path, and not visible from it. It is a miserable village of three or four bamboo huts. We had previously passed another and much better village, but as this was only six miles from Murichom, Capt. Pemberton determined to push on.

18th. I proceeded to Buxa. The path was somewhat improved, and the ascent gradual until an elevation of about 5500 feet was surmounted, from which the descent to Buxa is steep and uninterrupted. This place is seen from a ridge about 1200 feet above it. I reached it between 9 and 10 a.m., and found that my companions had arrived late on the preceding evening, having accomplished a march of twenty miles in one day. Scarcely any coolies had arrived, however, before me. The features of the country remained the same, the whole face being covered with dense black looking forest. Even on

^{*} Such is the nature of the path from Chuka to the plains, although it is the great thoroughfare between both capitals and Rungpore, that either the trade of Bootan with that place must be much exaggerated, or some other road must exist between these two points.

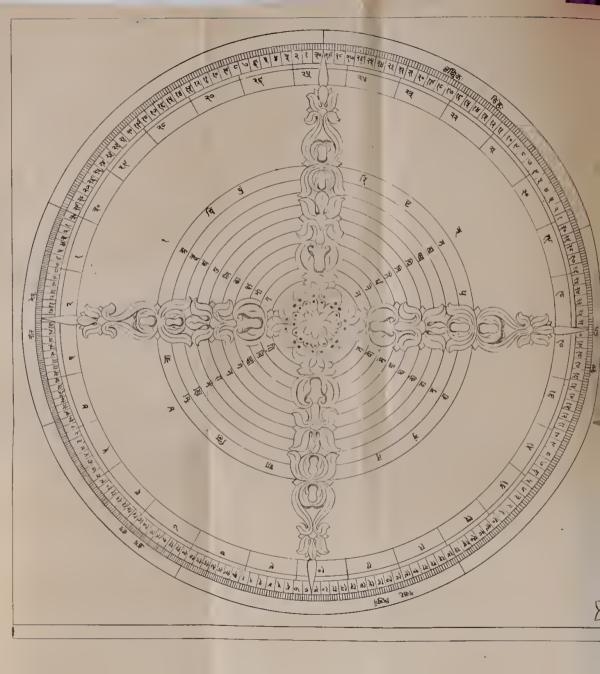
the ridge, which must have been between 5000 and 5500 feet in elevation, scarcely any change took place. As I descended to Buxa vegetation became more and more tropical, and on reaching it found myself surrounded with plants common in many parts of the plains of Assam.*

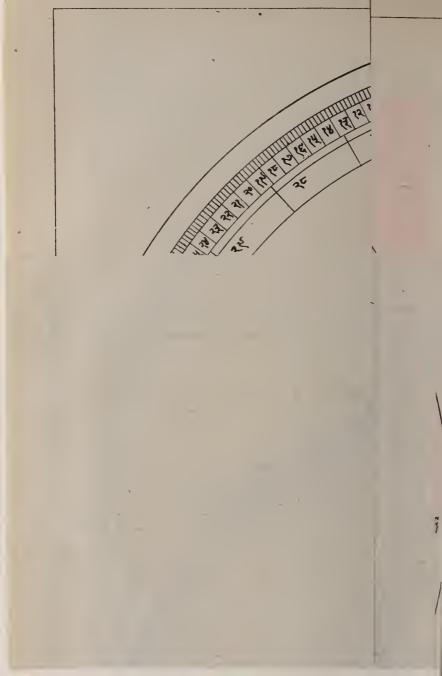
Buxa is rather a pretty place, about 2000 feet above the sea. The only decent house in it is that of the Soobah, who is of inferior rank. The huts are of the ordinary description, and do not exceed twelve in number. The Soobah's house, with some of those of Beugal officers, occupy a low rising ground in the centre of the pass, which is divided from the hills on either side by a small torrent. A view of the plains is obtainable from this place.

Captain Pemberton left Buxa a day before me, as I was detained behind for coolies, none of whom had yet arrived. On the following day I rejoined him at Chicha-cotta. The descent to the plains is steep at first, and commences about a quarter of a mile from Buxa. On reaching the steep portion a halting place, called Minagoung, is passed, at which place, all bullocks, which are here used as beasts of burden, are relieved if bound to Buxa, or provided with burdens, if bound for the plains. The descent from this place is very gradual, and scarcely appreciable; the path was good, and bore appearances of being tolerably well frequented; it passed through a rather open forest, low grasses forming the under-plants. plains were not reached for several miles, indeed the descent was so gradual, that the boundaries of the hills and those of the plains were but ill defined. At last however the usual Assam features of vast expanses of grassy vegetation, interrupted here and there with strips of jungle, presented themselves. The country is very low, entirely inundated during the rains, and almost uninhabited. Saul occurred toward that which may be considered the Toorai of these parts, but the trees were of no size.

Chicha-cotta is eighteen miles from Buxa, and is situated on a grassy plain; it is small and miserably stockaded, nor is there any appearance about the place indicative of comfort or security. To Koolta. We continued through nearly a desolate country, overrun with coarse grasses, until we came on the river, which is of considerable width, but fordable; we now found ourselves in the Cooch-Behar territory, and were much struck with the contrast between its richly cultivated state, and the absolute desolation of that belonging to Bootan. We continued traversing a highly fertile country, teeming with population,

^{*} Plantains, jacks, mangoes, figs, oranges, &c., are found about the huts of Buxa.





until we reached those uncultivated portions of Assam, that are so frequent in the immediate vicinity of the Brahmaputra.

Our marches to Rangamutty were as follow:-

From Koolta to Bullumpore.

From Bullumpore to Kuldhooba.

From Kuldhooba to Burrumdungur.

From Burrumdungur to Rangamutty.

At Rangamutty, where we received every civility from the Bhoorawur, we took boat and arrived at Goalpara on the

Beyond this it is scarcely necessary to trace our progress. I have only to add, that but one death occurred during the time the Mission was absent.

(To be continued.)

ART. VI.—Report on the Museum of the Asiatic Society. By Dr. Wm. Jameson.

The subjoined very important Report on the state of our Museum, forms a part of the Proceedings of April, but we deem it well deserving of the earliest publicity. During the few weeks Dr. Jameson held the office of Curator, his exertions have accomplished more than could be readily believed, in reducing the chaotic materials of the Museum into systematic arrangement and disposition. His suggestions will doubtless receive the attentive consideration they are so strongly entitled to, and we trust before long that our Museum will be guaranteed from such reproaches as Mr. Jameson now too justly inflicts on it. His accomplished successor, Dr. M'Clelland, has all the skill and zeal essential for success, but the means at his disposal are manifestly too limited to enable him to execute all the measures his judgment would dietate. We anxiously hope that the naturalists of the Society will be excited by Dr. Jameson's Report to consider of the best and readiest means for the establishment of a Museum befitting the first Scientific Institution in the As our funds have been heavily drawn on this season for the erection of a new suite of apartments, to accommodate our growing collections, we think it would be worthy of those who feel the importance of such ennobling pursuits, to come forward with the means for furnishing our Museum with every essential appurtenance of the best and most durable kind. We shall be happy to act as Trustees for a 'Museum Fund,' should our suggestions meet the approbation of those who understand and appreciate the object in view.—Eds.]

In reporting upon the present state of the collection of the Asiatic Society, we have felt much disinclination, fearing lest by so doing we might be considered as attacking the proceedings of our predecessors; we however consider it our duty, from the place we now hold, and the more so as we leave this in a few days for the Upper Provinces, trusting that when the statement has been laid before the Society, active measures will be taken to improve its condition.

We shall first notice the Minerals and Rocks. In these two departments the collection is exceedingly rich as far as numbers are concerned. Of the former there are upwards of two thousand specimens, and of the latter probably upwards of four thousand; but the miserable condition in which they have been kept-packed in drawers one above another, without paper, or any other material intervening-has rendered many of them entirely useless and unfit to be placed in the collection. In particular we would mention the Zeolites, many of which originally must have been magnificent. The Apophyllites (a species of zeolite) are very fine, and still valuable specimens, and had they not been so much destroyed, the Society might have claimed the merit of possessing, of this particular variety, the finest specimen, probably, in the world. Most of the other specimens have been equally neglected, and many of value destroyed. In regard to labels, there were but few attached, and of these many wrong. The Rocks, of which there is a most magnificent and extensive collection, would have been doubly valuable if they had been furnished with labels, indicating the locality from whence they had been obtained; at present after a collection containing every variety has been laid aside for the Society's own Museum, the others, when named, will form valuable duplicates for exchanging. To this department of the Society's Museum no attention whatever has been paid, although probably the most important. Lying beneath one of the tables in the Museum there was a large collection, said to be sent by Dr. Helfer, but as not one of the specimens was labelled, that is intimating where found, we have not been able to make use of them. In fact such a collection is quite useless to a Society; and even if some important mineral should be found in it, the value of the discovery could not be followed up. It would be of importance to intimate this to individuals engaged in making such collections.

Mammalia.—The collection of quadrupeds consists of about seventy specimens, many of which are exceedingly good, and a few very rare, among which we would characterise the Hylobates albimanus, Hylobates hoolock, Ailurus refugens, Ictides albifrons; but in this department the collection of the Society is very deficient, not containing above a fifth of the quadrupeds found in India. Moreover many specimens, from their bad condition, would require to be replaced as soon as possible.

Birds.—The number of birds prepared amount to upwards of six hundred specimens, and in addition to these there is a considerable collection in boxes, many specimens of which are not as yet in the Museum. Among the birds, there are some exceedingly rare and valuable specimens, and several new to science, which we shall now notice briefly. I. Larus kroicocephalus. The discovery of this species is probably one of the most interesting which has been made in ornithology for some time. In size it is equal to the Larus marinus of Europe, and possesses in the head and neck colours

one of the principal characters essential to the genus Kroicocephalus of Eton, in every other character it is a true Larus; and as the colour of the head and neck disappear in winter, we have therefore this species representing in summer the genus Kroicocephalus, and in winter Larus; shewing the necessity of abandoning the former genus. The specimen in the Society's collection is partly in a state of change from the summer to the winter. In the Edinburgh Royal Museum there is another specimen in perfect summer plumage: these probably are the only two specimens known. The name we have adopted is one which we proposed to the Wernerian Society, being the generic one of Eton reduced to trivial value. Belonging to that interesting genus the Leiothrix, Swains, of which there is but one species described, there are two new species in the collection of the Society, in the Edinburgh Museum there is a third, and in the Zoological Society's Museum of London a fourth, all of which are peculiar to India, and thus the number of species is now increased to five, shewing the necessity and importance of making new genera, if the characters presented are sufficiently marked, although at first only one species should be presented. We could enumerate a large series of genera which were represented a few years ago by one species only, but which now contain from three to twelve species. In a bird lately laid before the Society by Dr. Evans, and considered by him as a variety of the Aquila Chryractos, the Society has a new species belonging to the genera Haliaëtus; the only other specimen we have seen is in the collection of the Zoological Society of London. We cannot omit mentioning the Eurylaimus Dalhousiæ as exceedingly rare and valuable species, three specimens only being known to exist in collections. Many other novelties, some of them extremely interesting in illustrating ornithological geography could be pointed out, which however would extend our report to an undue length; we however may state that Dr. Helfer has sent lately to the Society a new Chalcites, and Irena puella, aud Calyptomina viridis, both of which were supposed to be confined to the Asiatic Islands.

Osteology.—The Osteological Department of the Society's collection is small, but still there are several splendid skeletons. The magnificence of the Fossil Osteological collection cannot be too strongly pointed out; but it is much and deeply to be regretted that there is no proper accommodation for it; which we hope will soon be remedied by proper cases being provided, and placed in the new apartments now building, in order that the many unique and valuable specimens may be properly exposed to view.

In regard to the *Iethyological*, *Erpetological*, *Conchological*, &c. departments of the Society we have not had any leisure to examine, and therefore forbear at present giving any report. But as there is much room for improvement in the departments we have already noticed, we beg to offer a few suggestions.

Minerals and Rocks.—Before the collections of Minerals and Rocks can be generally useful, there must be proper means for exhibitions, and we hope soon to see cases fitted up on the plan we proposed, or any other which may be suggested, furnished to the rooms. The advantages in having collections of Rocks and Minerals arranged and labelled properly, would no doubt be of the greatest consequence, seeing that it would form the basis for comparison of any collections which may hereafter reach the Museum; and also be of use to individuals for comparing their own private collections. As far as it lay in our power, during the short space of time we have had, we have arranged the Minerals in the tables formerly occupied by eggs, birds' heads, &c. only temporary however, expecting that more suitable cases will be provided. The Rocks are still lying

exposed for want of accommodation, but a few of them so arranged that when eases are provided, they can be removed by any individual.* The system we have followed is that of Werner, as improved by modern authors. If any member would now visit and see the extent of their Mineralogical collection, I am sure they would be convinced of the necessity of having proper cases.

The Bird cases since last Meeting have been fitted up with shelving, which has enabled us to arrange systematically the collection, and the system we have adopted is that of the Baron Cuvier. Moreover, in addition to the advantage derived in having a systematic arrangement, the cases will now contain three times as many specimens as they did formerly. To us it appears a most extraordinary idea, to suppose that objects of Natural History cannot be properly preserved in this country. No doubt in cases fitted up in the same manner as those of the Society at the present moment, they could not, either here or any where else; but if these cases were made air-tight, by lining the edges of the doors with chamois leather poisoned with arsenic, according to the plan adopted with the cases of many of the European collections, we would be bound to say, that the collections could be preserved nearly as well here as in Europe. At least this is a subject well worthy the attention of the Society.

In conclusion, we shall offer a few brief remarks in regard to the desiderata. To increase their collections, public bodies have generally adopted one plan, viz.-a memorial giving a brief account of the manner how to prepare, collect, and pack objects of Natural History, and at the same time pointing out those objects most to be desired. If such a memorial was got up under the auspices of this Society, and distributed among its numerous members and correspondents throughout India, the Society would not only possess for itself a collection in a very short time, but at the same time would have at its disposal, for making exchanges, a large series of duplicates; and in the space of a few years by so doing with the different collections in Europe, America, Cape, and Sydney, it would thus bring together, with little expense to itself, a collection which would vie with the various noble institutions on the European continent, and at the same time worthy of this the so-called City of Palaces. Before this can be done, a Catalogue of the collection must be made. Moreover the Society could in a series of tables exhibit by specimens, that is by bringing together the rocks of the different districts bordering on each other, the Geology of the whole of India, and thus in a manner supply that great desideratum, at least to individuals here, viz. the waut of a Geological Map, and probably it might be the means of leading to this desirable object; an undertaking worthy of support from such an institution, and from the country at large.

W. J.

^{*} Dr. M Clellaud informs us they have been once more swept into chaos by the unguarded hands of assistants since Mr. Jameson's departure. Nothing can more clearly prove the futility of attempting to do any thing in this department before proper cabinets are procured.—Eps.

ART. VII. - Proceedings of the Asiatic Society.

Wednesday Evening, 6th March, 1839.

At a Meeting held at the Grand Jury Room of the Supreme Court.

The Honorable Sir E. RYAN, President, in the chair.

The Proceedings of the last Meeting were read and confirmed.

The Honorable Sir H. Seton, the Rev. John Henry Pratt, Dr. William Jameson, Mr. E. Thomas, Mr. J. W. Laidlay, and Mr. A. C. Dunlop, proposed at the last Meeting, were ballotted for, and duly elected Members of the Society.

Read a letter from Mr. Charles Ritter, acknowledging his election as an honorary

Member.

The Officiating Secretary apprized the Meeting of the departure of their Curator, Dr. George Evans, to Europe; and after some discussion it was resolved that Dr. William Jameson be appointed to the office, on the same allowances as those drawn by his predecessor.

Library.

Read a letter from H. T. PRINSEP, Esq. forwarding for inspection Dr. ROBERT WIGHT'S Illustrations of Indian Botany.

The following books were presented :-

1838-by the Society.

Bulletin de la Societé de Geographie, vol. 9th-by the Society.

On the Ovulum of Santalum, by WILLIAM GRIFFITHS, Esq. - by the Author.

Die Stupa's (Topes) and die Colosse Von Bamiyan, by CARL RITTER-by the Author.

Journal of the Royal Asiatic Society, No. 9—by the Society.

Proceedings of the Bombay Geographical Society for August, 1838—by the Society.

Ditto of the American Philosophical Society, Nos. 1, 2, and 3, from January to August

5 Copies Alif Leila, vol. 1st in Arabic-subscribed for by the Society.

Lardner's Cyclopædia—Literary and Scientific Men, vol. 9th—from the Booksellers. Read an application from Premenaund Pundit, Editor of the "Nyeshadha," regarding the 2nd part of the work in Manuscript, and offering to making over the same to the Society, on condition of his being remunerated for his trouble in compilation.

Resolved that the application be referred to the Committee of Papers.

Museum.

A Gumsoor Battle Axe was presented by Mr. J. G. BALMAIN.

Statistics.

Read a letter from H. H. Sprv, Esq., Secretary to the Statistical Sub-Committee, intimating that in consequence of the Society's declining to publish the Documents compiled by them, they will no longer prosecute their researches.

The Annual Report for 1838, which had been presented on the 1st of January, was then read, and adopted by the Meeting.

Secretaries' Annual Report.

The indisposition and absence of the Rev. Mr. Malan since his appointment, and the short period during which we have held the office of Officiating-Secretaries, will we trust constitute a sufficient apology for the incompleteness of the present anniversary notice.

We have endeavoured by a diligent perusal of the proceedings of the year just elapsed to become familiar with the state and prospects of the Society, and we have also

sought more detailed information from the gentlemen severally responsible for the Library, Finance, and Museum departments.

On the general statistics of the Society we have to state that the accession of Members to the Society during the year 1838 was as follows:—

Ordinary Members, ... 25
Honorary Members, ... 1
Associate Members, ... 1

The loss of Members by deaths, departures to Europe, and withdrawals, has been —by departure to Europe, Messrs. W. Adam, A Colvin, H. Walters, Col. Burney, and Mr. James Prinsep. By withdrawals, Messrs. W. Bruce and W. Dent.

By deaths in India, Messrs. A. E. Dobbs and John Bell, and in France Monsieur A Jacquet, an honorary Member, and one of the most distinguished Orientalists of the day.

We designedly forbear on this occasion from the attempt at any minute obituary notice of the Members whose deaths we so deeply lament. The decease of M. JACQUET was only announced at our last meeting. His friend and fellow labourer, Eugene Bunnouf, in the letter which conveys this melancholy news, gives a touching narrative of the circumstances of M. Jacquet's malady and death. A victim to consumption, induced by his unremitting studies, he died at the age of 28, in the delusive confidence of revealing by his future labours much of what is still mysterious in the history and chronology of the Hindoo nations. A quarter of an hour before death he was still ardently pursuing his studies. In the homage paid to his memory in France, the Asiatic Society of Bengal most unanimously and profoundly concur.

Publications.

We have to state that during the past year the 4th and last volume of the "Mahabharata" has been the only work printed in the Oriental department. The volume will be immediately published, and will cost the Society between 4 and 5,000 Rupees. The liberality of Government has most opportunely enabled the Society to meet from its own resources this heavy outlay, which otherwise would have fallen on our respected Secretary, Mr. Prinsep. The sale of the work in France has unfortunately proved far short of M. Burnouv's sauguine predictions.

The publication of the "Sharira Vidaya," or translation of "Hooper's Anatomist's Vade Mecum," has been sanctioned by the Society in conjunction with Mr. Mun, who has generously subscribed 1,000 Rupees for this special object. There is yet however much difficulty in this undertaking. The professional members of the Society consider the work wholly useless without plates, and the lowest estimate yet obtained places the cost of such illustrations at $6 \times 250 = 1,500$ Rupees. A reference to Europe was evidently expedient to procure cheaper and better cuts than are obtainable in India, and for the result of such reference the work is now postponed.

The publication of the "Sharya-ul-Islam" by the Newab Tahawun Jung, has unfortunately been much retarded. The delay is attributable to the conjoint inactivity of the Printer and of the Monlavee employed to correct the proofs. Means are being taken however to accelerate the completion of the work. An advance of 800 Rupees has this month been made to the Printer, in pursuance of a resolution of the Committee of Papers and Finance.

The Transactions of the Society will soon be augmented by the publication of the 2nd Parts of the 19th and 20th Volumes. We may be pardoned for anticipating that the literary reputation of the Society will be well sustained in their pages. If the Society has been reproached with neglecting the Natural History of Asia, the part of the

Physical Researches now in the press, will, we are confident, more than remove that stigma. The bulk of the Physical Part will consist of Dr. M'CLELLAND's elaborate paper on "Indian Cyprinide."

In connexion with the subject of publications, we should not omit to notice two works by Members of the Society, to which Government has contributed either by subscription or by still more direct support. The first is the version by Mr. Torrens of the ever-charming "Alif Leila." The second is the remarkable and valuable Cochin-Chinese Dictionary, by the Right Rev. the Bishop of Isauropolis, now Roman Catholic Bishop of the Diocese of Bengal.

Antiquities.

In antiquarian enterprise, research, and discovery, the past year has been most prolific. Among the events of interest we notice in our records, we may particularize the liberal grant by Government for the erection of the Allahabad pillar—the receipt from the Rev. Mr. Wilson of fac-similes of the Girnar inscriptions—Mr. Prinsep's most important discovery of the name of Antiochus in two of the edicts of Ashoka—Mr. Prinsep's translation of the religious edicts of Ashoka, discovered in Gujerat and in Chitack—and the discovery that the inscription of Junegurh related the circumstance of the repair of a bridge in the time of Chundra Gupta, by Ashoka, his grandson.

To these let us add, the interesting fruits of Mr. KITTOE'S Researches in Cuttack—the active and successful measures adopted by Government to procure fac-similes of the Junegurh and Girnaghur inscriptions—the verification by Lieut. Postans of Mr. Prinsep's views as to the reading of the name of Antigonus next to that of Ptolemy in the 14th edict, in the Girnar inscriptions—the measures taken by Government to prevent the demolition of the Kanarah Temple—and, lastly, Professor Lassen's simultaneous proposition of an alphabet for the Pali and Bactrian languages, nearly identical with that described by Mr. Prinsep in the July number of the Journal. On even this disjointed and hasty glance, we may well be proud of the progress the Society has accomplished in the fulfilment of one of the chief objects of its institution. It will, we doubt not, be universally admitted that the Asiatic Society during the past year has justified its high name, and retained its natural position, as the most energetic and successful agent of antiquarian discovery in the East.

Statistics.

Owing to the lamented deaths of Sir B. Malkin and Mr. Bell, the retirement of Messrs. Walters and Adam, and the withdrawal of Messrs. Bignel, Curnin, and M 'Clintock, the Committee was at the end of the year 1838 reduced to four Members, Messrs. Ewart, Spry, Baillie, and Stewart. Mr. W. P. Grant has since been elected a Member.

It is understood that Dr. Stewart has been for some time engaged in tabulating translations of the Records of Native Mortality in Calcutta, with the view to illustrate the localities of disease in this city, and the effects of climate on the health of its inhabitants. Dr. Spry has prepared a series of tables illustrating the state of education among different classes of Society in Bengal. Mr. Ewart has ready for press some very valuable original tables connected with the currency and trade of Calcutta. The only paper which has yet appeared in common with the labors of this Committee, is the very important document by Mr. H. T. Prinsep, on the decrement of juvenile European life in Bengal. This valuable contribution to vital statistics has already appeared in the Society's Journal.

The Statistical Committee have met with the most willing and efficient support from the Government, and from the Parent Society. Access has been granted to all official records connected with the subjects of finance, commerce, education, and judicial administration. The Society has already contributed 500 Rs. to defray any expenses incurred by the Committee. High expectations are consequently entertained as to the harvest to be reaped from so fertile a field, by such active labourers, and under such warm and constant encouragement. The form best suited for the publication of the documents already prepared bas excited considerable discussion, and still awaits a final decision.

Library.

The Librarian has been kind enough to comply with our request for a detailed report of the accessions to our collection during the last year, and he has classified the entire under the heads of languages and subjects. We now beg leave to present his report, by which it appears that we have received,

Publications in	English,		117
in	French,	 	31
in	Latin,	 	3
in	German,	 	5
in	Dutch,	 	2
in	Persian,	 • •	6
in	Arabic,	 	4
in	Turkish,	 	1

Total, .. 174 up to the period of Mr. Csoma's Report.

On the last day of the old year, we had the pleasure of receiving from M. Cassin the highly important consignments exhibited on the table at the last meeting.

199 vols. 4to, and 8vo.

109 Pamphlets.

The works in question embrace some of the most important and valuable publications in every department of Natural History.

The mode in which this supply has been obtained is also very gratifying, the expense having been defrayed by the sale of our Oriental Publications in Paris. It is pleasing to observe this reciprocation of benefits by the cultivation of apparently opposite pursuits—We have exchanged the ancient lore of the East, for the most modern and useful sciences of Europe. Each branch of our labors thus proves auxiliary to the other. The researches of the naturalist are promoted by the discoveries of the philologist and antiquarian, and thus, each in our particular sphere, we sustain the reputation and enhance the utility of a Society established for the universal purpose of investigating "whatever is performed by man or produced by nature" in the East.

Museum of Natural History.

Mr. Evans has sent in an Annual Report, which will be published separately for your information.

Miscellaneous.

During the past year some miscellaneous passages in our history deserve to be recorded in our annual notice.

In January we had the gratification of witnessing the erection in our apartments of the bust of our distinguished associate, Professor Wilson. The feeling excited on

this occasion, led on the following month to the adoption of measures, by which we look forward to an early installation of the like remembrances of Sir Wm. Jones, of Mr. Colebrooke, and Dr. Mill. This is indeed an object worthy of a grateful and wise Society, and must excite in the present Members the ambition of ultimately describing such inestimable rewards.

In February a despatch was received from the Court of Directors, ordering 40 copies of each number of the Society's Journal—an act of generous patronage most fitly bestowed on the periodical, as it was then conducted. It was moreover but the forerunner of still greater munificence, in the grant authorized in September of 500 Rupees per mensem for the encouragement of Oriental Publications.

Nor while we acknowledge this princely aid from Government, should we be silent on the liberality of some individual benefactors. Among these, Mr. Muir stands pre-eminent—his subscription of 1000 Rupees to the expenses of the "Sharira Vidaya" will we trustere long be instrumental in placing a practical work on Anatomy within the reach of the hereditary physicians of the East. Another act of warm co-operation, and we have done. Let us commemorate the readiness with which Mr. James Prinsep sustained, by an outlay of 6,000 Rupees, the publication of the "Mahabharata," which would otherwise have necessarily been discontinued. For this we are fortunately enabled to indemnify Mr. Prinsep, but he is not the less entitled to this grateful notice of his unrivalled liberality.

In conclusion of this very imperfect Report, we should have dwelt in due and deserved detail on the vast loss we have experienced in Mr. Prinser's departure to Europe, had not the subject been so fully and recently before the Society, and so perfectly dealt with in the President's address. We have now only to express our earnest hopes that in full health and spirit Mr. Prinser may soon return to the scenes of his brilliant and numerous triumphs. His absence must not however altogether nullify the movement he excited. It seems to us too that the best proof, of the esteem and affection in which we hold him, will be the perseverance in his pursuits, and in the support of his Journal, until his presence enables the Society to enjoy again the advantage of his inestimable labours.

(Signed) J. C. C. SUTHERLAND,
W. B. O'SHAUGHNESSY, M. D.
Acting Secretaries.

Meteorological Register, kept at the Assay Office, for the Month of March, 1839.

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	Weather.	Aspect of Sky.	clear. do. do. overct. cl.	clear.	clear. do. cum. few.	cir. cum. fcw. do. do. fine. do. do. Showcry.	clcar. do. hazy. clear. do.	clcar.	Between cl and cldy.
	*	Force.		0	A6-16-1	111200	10 mm 20 10 10 10 10 10 10 10 10 10 10 10 10 10	west	02
Afternoon, 4 P. M.		tion.	စ်စ်စ် နှဲ့ဝံစ်		e ¥ ₹	* * * *	× × 0 × 0	स्रं	
		-peri()	% 0 % % % 9 E		ું છે. જે	* % % i	တ်တံတ်တံ တိ	တ်	_
	Aqueous tension.	By Hair Hair Hygrometer.	322823	22	845 150 150 150 150 150 150 150 150 150 15	2389	88488	88	35
	Aqueou	By Wet bulb.	3891898	18	888	31	23881	97	25
	te A	ByDewpoint	882288	27	61281	8228	552255	∞	177
	. 1	Hair Hy-	8247088	20	67.50	55 54 57 59	25 57 8 48	99	739
	Hygrometry	Differential thermometer.	23,4 23,4 26,4 23,4	21,4	22,8 20,0 24,0	17,0 16,1 23,7 19,0	29,7 26,0 22,0 23,0 29,1	22,9	57,9
	lygı	Depression.	22,22 26,22 16,53 22,96 22,96 22,96 23,96 24,96 25,96 26,96	23,9	23,6 19,7 22,6	17,5 16,6 25,2 19,1	285,8 20,4 20,4 29,6 29,6	23,1	
		1	8000000 900000	77	020	8602	<u> </u>		13,2 22,8
	rature.	Jaioq wed	44,56 47,0 47,0 43,3 6,3 6,3 6,3 6,3 7,3	42,1	41,0 40,0 40,0	45,0 45,0 45,6 6,6 6,8	37,0 41,0 47,0 40,0 37,5	43,7	<u> </u>
	Ten	Air.	990,7 992,5 991,9 93,8	88,5	92,0 93,0 92,3	90,6 91,9 83,1 1,68	94,9 95,1 96,4 94,7	96,7	92,5
	Atmospheric Pressurc.	Height at 32 Fah.	29,792 ,772 ,749 ,711 ,678	,714	247, 288, 918,	287, 138, 138, 138,	127, 167, 168, 1788, 1788,	,598	29,707 92,9
		Old Stand Barometer.	29,848 ,820 ,807 ,759 ,714 ,591	,760	,777 ,842 ,860	028 258 076 837 837	. 745 . 690 . 614 . 676	019'	29,739
	Weather.	Aspect of Sky.	cir. cum. few. fine. clear. do. cir. str. cldy. clear.	clear.	cir. str. clear. do.	cir. cum. clear. hazy.	clear. do. do. do.	clear.	Between cl.
1		Force,	W W W 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	はなるる	-222-	Honor Ho	ಣ	137
		Lion.	. e e e e e e e e e e e e e e e e e e e	W.	₹ ₹ ₹	W. e. W.	* * 0 * *	å	
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	Aqueous tension.	By Hair Hy-grometer.	56 56 56 56 56 56 56	R	5242	5282	888±≈	74	19
	Aqueou	By Wet bulb.	82878888	23	425	5538	13356	361	1:8
		By Dewpoint,	4448348	30	2 448	\$ 4 4 6	84888	2	127
	etry.	Hair Hygro-	768858	51	7889	9386	88888	8	8
Forenoon, 10 A. M.	Hygrometry	Unferential the Princial the Principle t	01-012 01-012 01-00 01-0	21,8	7,00 14,50 14,00 1	7,5 6,2 13,0 13,3	13,0 10,5 11,8 11,8 15,7 23,9	9,0	11,6
		Depression.	9.07.7. 0.00.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	20,8	8,0 6,1 14,2	6,6 5,6 12,5 12,8	12,5 10,3 16,4 26,0 26,0	9,3	83,8 55,6 11,2 11,6
	Temperature.	Dew point.	59.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	45,0	55,0 58,0 55,0	57,3 61,0 56,1	53,0 64,0 62,3 51,2	64,7	55,6
		Air.	860.25 860.25 860.25 860.25 860.25 860.25	81,1	81,3 83,4 85,5	83,2 81,3 81,3	88.89.88 8.60.60 8.00.00	87,3	83,8
		Well water,	7,7,6	1,97	2,8 2,8	77,5	77,5 78,1 78,1	79,5	78,1
		Waler.	87.25 27.25	79,4	15 N	2000 7,12 1,42 1,43 1,43 1,43 1,43 1,43 1,43 1,43 1,43	81,2 81,7 81,6	33,5	81,2
	Atmospheric Pressure.	Height at 32 Pah.	8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8	,8147	82.69. 83.89.	82.82.82 8.82.82.	<u>*************************************</u>	,714	29,843
		Old Stand Barometer.	1.85.95.7 1.00.95.7 1.00.95.7 1.00.95.7	,836	88.00 4.00 5.00 5.00 5.00 5.00 5.00 5.00 5	8. 2. 3. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	S. S. C. E.	,721	138,83
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